GV 771 Y2

FEBRUARY, 1924

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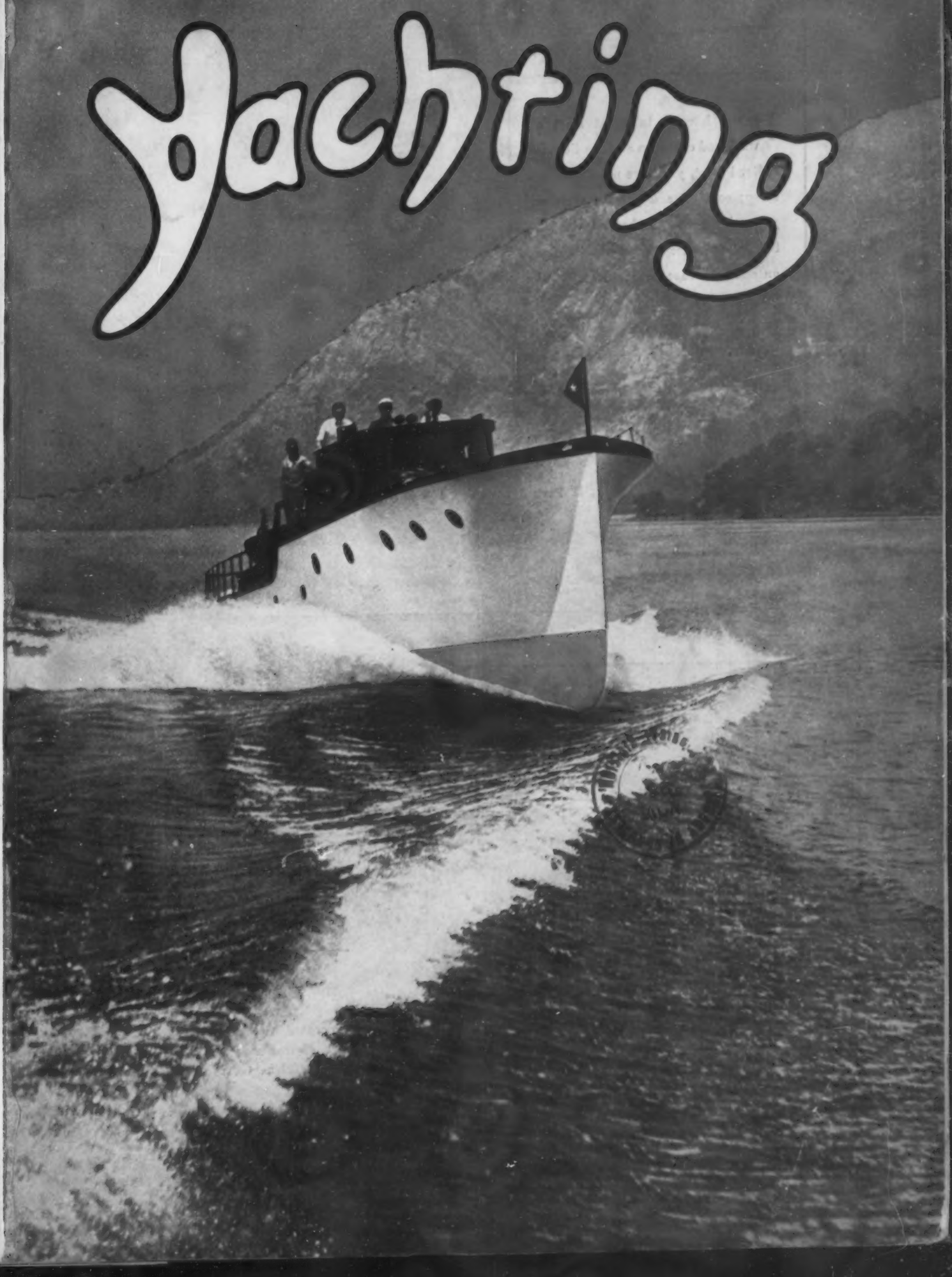
Yachting



IF you haven't taken at least a week-end cruise on an Elco Standardized Boat, you have missed something; comfort and privacy such as you seldom find in hotels; restful, invigorating sleep; days of indolence on sunny, breeze-swept decks.

At Port Elco you will find, ready for your most critical inspection, four of the Elco Standardized Models; or, if you wish, the Elco Catalog, with detailed specifications, will be sent at your request.

Years of development have made Elco interiors most comfortable and "livable"—as typified by the deck house dining salon of the 56-foot Elco Twin Screw Cruiser, shown here.

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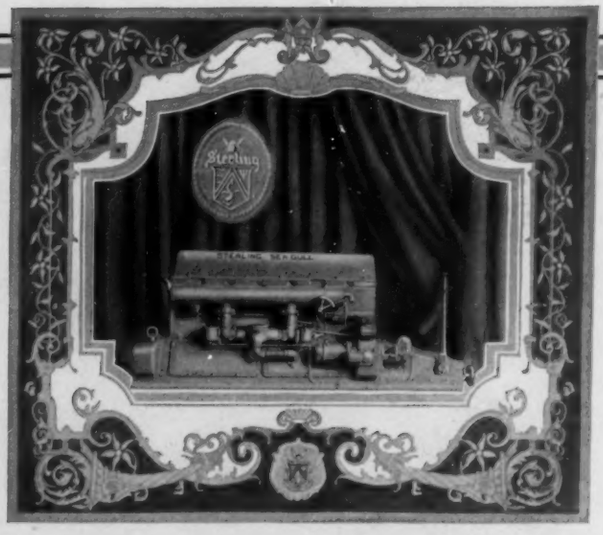
Tel. Vanderbilt 2320 **NEW YORK CITY**

Elco Motor Boats



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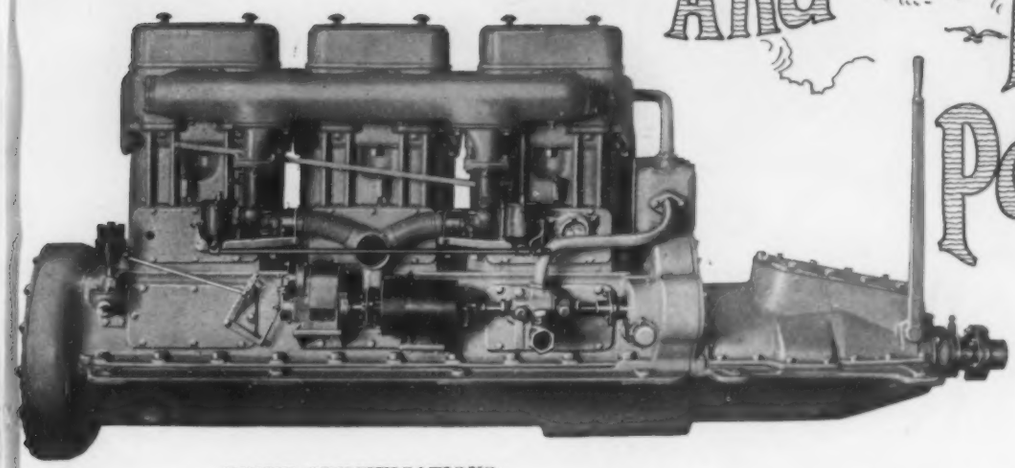
BECAUSE of the advanced engineering principles incorporated in their design, together with practical, sane construction and accuracy of workmanship, the STERLING Models represent reliable, smooth, clean and powerful engines.

12 to 300 H.P.
Slow turning and high speed

STERLING ENGINE COMPANY **1258 Niagara Street, Buffalo, New York**

Yachting, February, 1924, Vol. 35, No. 2. Published monthly at 25 W. 43rd St., New York, N. Y. $4.00 per year, 35 cents per copy. Entered as Second Class matter July 25, 1907, at the Post Office at New York, N. Y., under the Act of March 3, 1879

And now a High-Powered Buffalo

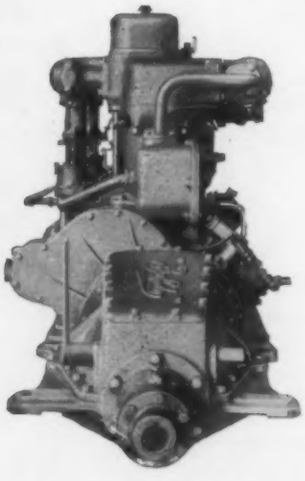


BRIEF SPECIFICATIONS:

6 cylinders, 5½" bore, 7" stroke, cylinders cast in pairs with removable heads containing overhead valves, one intake and one exhaust for each cylinder. Valve seats completely water jacketed. Valve operating mechanism mounted on top of cylinder heads and completely encased in oil tight enclosures of cast aluminum. Seven bearing crankshaft, 2⅝" diameter, hammer forged and heat treated. Seven bearing camshaft, 1¼" diameter. Engine built either with aluminum or iron base and crank chamber. Weight in aluminum 2,050 lbs., in iron 2,675 lbs. All bearings are removable bronze backed, babbitt lined type. Bearing caps of manganese bronze. Connecting rods drop forgings of steel, heat treated, bronze bushed at upper end on piston pin, 1¾" diameter. Crank pin bearing, 2⅝" diameter, 2¾" long. Fly wheel and all moving parts enclosed. Lubricating system, full pressure type throughout of dry sump system with double oil pump and separate service tank, also water jacketed oil cooler. Two 1¾" Stromberg carburetors with safety drip pans fitted. Rotary oil pump for vacuum fuel supply system. Water jacketed intake manifold. Ignition, either double with separate magneto and battery ignition or dual two-spark magneto, as preferred. Clutch and reverse gear of multiple disc and planetary type internally lubricated by oil under pressure passing through the hollow crankshaft. Cooling by gear type pump delivering water first through oil cooler, then to water jacket of exhaust manifold, then to cylinder jackets and finally through hot water jacket surrounding gas intake manifold. Electric starter, generator and storage battery included in regular equipment. Large crank case panels and complete easy accessibility.

A Conservative High-Speed Engine

Bridging the gap between the recognized superior reliability, durability and economy of the slow speed, heavy duty type, and the compactness, smoothness, greater H. P. with less weight, high propeller speed, etc., of the prevailing "high speed" engines—combining the virtues of both and being free of the ailments of either—this latest Buffalo stands in a class by itself as the quintessence of marine engine refinement and efficiency.



Nothing freakish—nothing experimental—just a combination of modern accepted engine refinement and thirty years knowing how to build really worth while engines. Not an untried new model but an engine thoroughly tested under adverse conditions in actual service for the entire 1923 boating season and now offered with the proud confidence that it will still further enhance the Buffalo Reputation.

For the express cruiser, the large fast runabout, the day cruiser, the fast passenger boat, or wherever maximum power and reasonable weight, together with absolute reliability and durability are the considerations, this new Buffalo is the logical answer to the power question.

Our limited 1924 production of this model is being rapidly taken up by those who had advance information but reasonable deliveries are still obtainable.

Just say so and we will gladly send complete descriptive bulletin. Tell us about the boat in connection with which you are considering it.

BUFFALO GASOLENE MOTOR COMPANY
1271-1283 NIAGARA STREET
BUFFALO, NEW YORK

"The Engine of Constant Service"

There is an apparent discrepancy

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or the pagination is incorrect.

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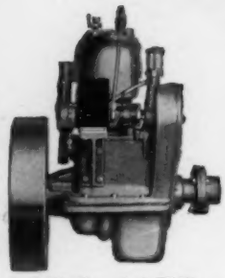
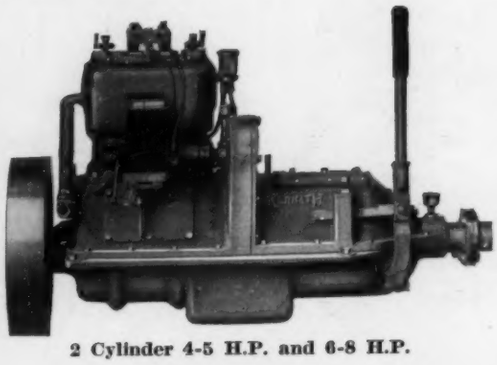
KERMATH

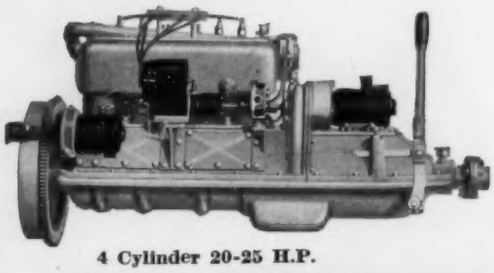
"A Kermath Always Runs"



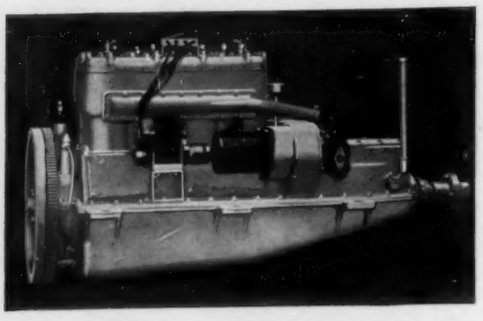
1 Cylinder 3-4 H.P.



2 Cylinder 4-5 H.P. and 6-8 H.P.



4 Cylinder 20-25 H.P.



4 Cylinder 35-50 H.P.

Well, it was a Grand Show!

Summing it all up, the Motor Boat Show just held in New York City was "a Grand Show."

Bigger and finer every year than the preceding shows, almost every manufacturer of marine motors was represented with an exhibit this year.

And of course the famous line of Kermath motors was there with a full representation. Every one of our models was on display in the Kermath booth.

All through Show week our exhibit was crowded with throngs anxious to discover the secret of the famous motors of which we can truly say, "No Kermath has ever worn out."

But quality such as is built into Kermath Motors is something that cannot be seen. It is in-built and discloses its worth only after long service in the hands of the user.

Business transacted was mighty fine, and, all in all, we are tremendously elated over the results of the Motor Boat Show.

KERMATH MANUFACTURING COMPANY
5893 Commonwealth Avenue
Detroit, Michigan

Everyone is looking for something new or unusual in the way of power cruiser design. Here is a snappy little boat with a number of novel features in her profile and layout that should appeal to the power boat cruiser. She is the *Harriet*, owned by Mr. Philip Schaefer of Buffalo. It was the aim of the designer to produce a boat that would give comfortable accommodations and good speed, and yet one that would not require a crew. He evidently succeeded. She is powered with a Sterling six-cylinder Sea Gull model, and makes 20 miles per hour.

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February, 1924

Vol. XXXV Number 2

HERBERT L. STONE, EDITOR

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To the Readers of Yachting

AS this number of YACHTING is the first to appear since I acquired the ownership of the magazine, I feel that a word is due its readers with regard to future policy.

It shall be the purpose of those in charge to publish each month a magazine well written, generously illustrated, of increasing interest, and one which shall at all times and in every way adhere rigidly to YACHTING'S traditional standards of clean journalism and sportsmanship.

YACHTING'S scope is international. It is read from Coast to Coast and across the seas as well. With this fact in mind, the editors will devote more space than heretofore to news from distant points. The content of matter with regard to racing events, club notes, refinements in yacht design and motive power and general gossip of sport on the water will be greatly increased. Short sea stories will be added as a new feature.

With the March issue, the size of the page will be increased somewhat in order to permit contemplated improvements in cover design and interior layout.

Mr. Herbert L. Stone will continue as YACHTING'S "Skipper" and the paper has been most fortunate in securing as Associate Editor Mr. Samuel Wetherill, whose frequent contributions to YACHTING'S columns have met with so much favor. Mr. Wetherill, as a regular member of the staff, will, in addition to assisting in the general editorial work, continue to contribute special articles and cruising and race reports. The business affairs of the paper will be in charge of Mr. Earle D. Grimm as Vice-President.

Every effort shall be made to retain, and to retain worthily, the support and affection which YACHTING'S readers have accorded it for seventeen years, and to which alone is due the success which it has achieved.

JOHN CLARKE KENNEDY.

Feb. 1st, 1924.

Address all communications to Yachting, Inc., 25 W. 43rd St., New York City. John Clarke Kennedy, President; Earle D. Grimm, Vice-President and Treasurer; H. Kirby Grafton, Secretary. European Agent: The International News Co., Ltd., Bream's Building, London, Eng.

Photo by C. W. Babcock.

Driving Her! With reefs down in fore and main, the schooner *Bagheera*, owned by Carroll Brown, smoking along during the race to Bermuda last year. There will be another race to the islands this Summer, the details of which appear elsewhere in this issue of YACHTING.

YACHTING

VOLUME XXXV
NUMBER II

FEBRUARY, 1924

35 Cents a Copy
$4.00 a Year

Handling Small Vessels at Sea

Being Some Observations on Winds, Waves and Handling Vessels Under Sail in Heavy Weather, by the Skipper of the Famous *Tilikum* and *Sea Queen*, Capt. J. C. Voss

The sloop *Xora*, 25 feet long, riding out a gale on the Pacific to a sea anchor, with 150 feet of cable and a riding sail.

DURING my travels, principally in small vessels, I have, perhaps, met and exchanged views with more yachtsmen than the average man afloat. I have found that the majority, although fully capable of sailing a small boat on an inland lagoon or other landlocked waters, also like to know something about the peculiarities of the high seas and how to overcome the danger of breaking wind waves. As stated in my narrative, I have sailed in and managed sailing vessels of different sizes, from the tiny *Tilikum* up to a ship carrying nearly 3,000 tons of cargo. This has offered me an excellent opportunity to study breaking seas under all weather conditions, of which I have tried to take the best advantage. The knowledge thus obtained in my long sea-faring career has condensed into certain rules which, I have reason to hope, may prove of practical value to a wider circle. And I trust that these explanations and instructions will not alone be interesting and useful to yachtsmen but, also, may serve as hints to young officers and even masters of ships, when danger looms ahead.

The Speed, Height and Danger of Breaking Wind Waves

The speed of waves I have estimated in the open ocean during various gales when they had attained full growth, as follows: When hove to under a sea anchor with 150 feet of anchor rope out and when just on the top of a large wave, the sea anchor float which was fastened with fifteen feet of line would appear at a distance a little less than halfway to the top of the next wave. By allowing for the angle in which the anchor rope inclined I ascertained an approximate total distance from crest to crest of 300 feet. Under the same conditions I have measured the speed of the waves by marking the difference of time between two succeeding seas when their crests passed the boat. The interval was seven seconds on the average. In basing the calculation on the above figures an average speed of twenty-five and one-third nautical miles per hour is obtained.

The height of waves I have ascertained on large vessels. I chose a position in the rigging just high enough so that the tops of the large waves would appear a little below a line between my eyes and the horizon. The exact distance from the waterline of the ship to the level of my eyes was known to me. While hove to in the ship *Prussia* during a heavy gale in the South Pacific I found in this way the height of the waves from trough to crest to amount to nearly forty feet. In this connection I may mention that in books and newspaper reports from time to time statements appear recording the height of waves encountered at sixty and even seventy feet!

Breaking wind waves in the open ocean where no obstacle is met are caused by strong winds the speeds of which are much faster than the velocity of a wave. As the wave culminates in a crest the wind behind forces it over, transforming that part of the wave into a forward moving body of water, spray and foam. A wave in this condition is termed by seamen a "breaking sea."

Breaking seas have washed countless numbers of seamen off vessels' decks and provided them a watery grave. Their irresistible force has smashed in bulwarks of ships, buckling and bending iron stanchions, and tearing away steel plates. Many cases are on record where breaking seas have sent to the bottom new and strong ships with every man on board. There seems to be no limit to the destruction wrought by the overwhelming power of breaking seas. But are these breaking seas so formidable in themselves, or is there not many an instance where those responsible for the management must be blamed for the damage suffered by their vessels during heavy storms? I take the liberty of stating certain facts, and making certain inference.

When sailing in large sailing vessels I have noticed that they will lie perfectly comfortable and dry, provided they are properly loaded and hove to. Even when storm

sails are carried away, there is no imminent danger; the vessel will roll about and in doing so ship seas, but the water in this case is harmless.

For five years I have been master of sealing vessels averaging in size 75 tons. In these I have sailed from Victoria, B. C., and from Yokohama in the depth of Winter, when they were loaded down to the scuppers with sealing outfit. From six to nine sealing boats, each from 18 to 20 feet in length, were lashed on deck. These latter were built of so light a material that their planking could have been knocked in with a stroke of the fist. In those vessels I have ridden out the worst gales in which other ships were smashed to pieces. But through properly heaving to, on no occasion did I ever have a boat smashed in, nor have I sustained the slightest damage to vessel or outfit.

Thus it becomes evident that the action of heaving to in time and in the right way is of the utmost importance in order to avoid damage or, eventually, total loss. I may say that I believe in oil to calm breaking seas. I have always used it freely when in sealing vessels during heavy storms for the protection of the boats. For if our boats had been broken we would have been robbed of the means of carrying out our enterprise. It is advisable, however, not to attribute too much efficacy to oil, as the following incident goes to show: On March 19, 1911, while 300 miles to the south-southwest of Cape Lopatka in the 75 ton schooner *Chichijima Maru*, from Yokohama, we were hove to in a heavy gale. When oil was administered it froze as soon as it came in touch with the water. Notwithstanding this, and despite the vessel being loaded down to the scuppers, we did not sustain the slightest damage to ship, boats, or outfit. But we were readily hove to and thus safe from shipping seas, which proved to be a sufficient safeguard.

I will go a little further, claiming—and I have absolute confidence in doing so—that on no occasion while in charge of a vessel which was hove to under storm sail in a violent gale have I shipped a sea that caused any damage to ship or outfit. even though the storm sails had been carried away by the force of the wind. And the same applies to the small boats I have sailed on long cruises when they were hove to under sea anchor and riding sail.

These results I have obtained by observing the following: The storm sails were trimmed in such a way that the vessel's head lay near the wind (? probably four or five points), her headway was stopped and she made a nearly square drift. The wake then, instead of being under the stern, as is the case in sailing, will appear along the vessel's weather side, which has a most wonderful effect in smoothing down breaking seas on their approach.

To sum up, I have found that breaking wind waves in the open ocean become dangerous only when the vessel is driven through the water, and the faster she is traveling the more damage a sea is likely to inflict. Pooping seas, i.e., seas breaking over the stern when running, are the worst of all.

In What Size of Vessel is it Safe to Heave to Under Sail in Bad Weather?

The smallest vessel in which I hove to under a storm sail only, i.e., without using a sea anchor, was the *Ella G.* from Victoria, B. C., an 18-ton schooner, 49 feet over all, 14 feet beam, and 8 feet draft. In her I weathered four heavy gales in the North Pacific while under a storm trisail hoisted on the mainmast. With this she swung about, sideways to the sea and wind, as much as eight points. However, a square drift with the wind was maintained throughout and never a sea was shipped. I used oil in addition. From this experience I conclude that a vessel of at least 50 feet in length is quite safe to heave to, with the exclusive use of storm sails.

The Proper Time to Heave To When Running Before a Strong Wind and Sea

With regard to this, I may say that even a large ship, when deeply loaded, is liable to be smashed up by a single bad pooping sea. Consequently, to be on the safe side, she should heave to right at the beginning of a gale. But the greatest care and precaution are necessary where small vessels are concerned. Therefore, my recommendation is to heave to at the approach of a gale, when waves commence breaking and the vessel becomes heavy on the rudder. Always remember that things are quite different in running from when you are sailing with a beam wind or by the wind. In the latter case a vessel will ship spray, which serves as a warning to you. This happens more often and gets worse as wind and sea increase, until you are obliged to shorten sail and heave to. But in running before it your vessel may go along quite comfortably and dry for a time and then, with dreadful suddenness, a sea may come over the stern and put you and your ship out of business. So, once more, I repeat my advice: be most careful in running and heave to rather a little earlier than might be deemed necessary by others.

How to Heave To When Running Under Sail

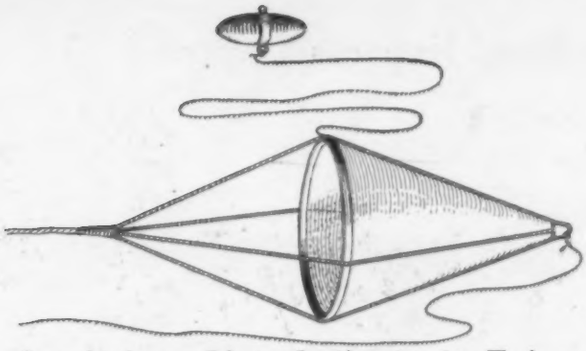
If a vessel is about to heave to before the seas have started breaking heavily, all that is required is to put the helm down and let her come to the wind with the sails she is running under. But if it be blowing hard and bad seas are appearing already, care must be taken in bringing the vessel's head to sea. For if a bad sea is met with in coming round while the vessel is still retaining headway, disastrous results may ensue. To avoid this the man in charge should be on the lookout for a chance when the seas are running fairly smooth, which will occur from time to time even in the height of a gale. Then you put your helm down and let the vessel come up with a staysail sheet to windward. The latter will help to stop the ship's forward motion when she swings head to wind, which is the principal factor in the maneuver.

While sailing in sealing vessels I have on various occasions when running before a bad sea lowered all sail and let her come up to the wind under bare poles, setting storm sails afterwards. And I have found it to be an excellent plan.

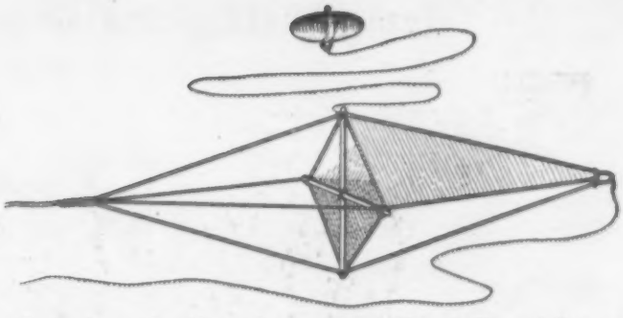
What Storm Sails Should Be Carried in a Gale, and How to Set Them

It depends entirely upon the build, lines and rig of a vessel, as to which sails she will lay under to the best advantage. To find this out early, one must study her weak points, and it is the duty of every shipmaster to make trials with regard to this matter at the beginning of the first gale he encounters. I shall cite an instance here.

The schooner *Jessy* from Victoria, B. C., length over all 75 feet, beam 22 feet, draft aft 11 feet, forward 9 feet, was built on the lines of a yacht, and was a very fast sailer. With this vessel, deeply loaded to the scuppers, I sailed from Victoria on December 1, 1907, and a few days later met with an exceedingly heavy gale off the Columbia River. At the beginning of the storm I went through a variety of storm sail drills, and by doing so found that she lay to splendidly under three-reefed fore-



Sea anchor for a small boat made with an iron ring. The bag is four feet in length.



Sea anchor made with wooden cross bars. The trip line and float are shown in both these drawings.

sail with the sheet well hauled in, double-reefed fore-staysail with the sheet nearly at midships, and the wheel a little down. Under these sails the vessel reached ahead a little and lay to very comfortably. Gradually, as the wind and seas increased, I put the wheel down more and more and hauled the stay-sail sheet more to windward. When the gale was at its worst she lay comfortable and dry with a double-reefed fore-staysail sheet to windward, three-reefed foresail sheet well in and the wheel halfway down, and made seven points leeway.

Another example is the previously mentioned schooner *Chichijima Maru*, length over all 75 feet, beam 20 feet, draft aft 8 feet, forward 6 feet 6 inches, full built but fairly fast. This vessel lay to excellently under a three-reefed foresail, sheet well in and a close-reefed trisail, the sheet flat at midships, and also made seven points leeway.

Other vessels will lay to under close-reefed fore-staysail, foresail, and trisail, and so on, according to their peculiarities.

What Signs Assure the Master That His Ship Is Properly Hove To in a Gale, and Thus Safe from Shipping Seas

If your vessel lies four to five points from the wind and makes a nearly square drift she is safe.

For example: If a vessel lays to on the port tack in a northwesterly gale she should be heading about north to north by east and make an approximately easterly drift. However, she may fall off at times a point or two, but as long as the vessel does not range ahead there will be no seas coming over to do any harm.

The Drift of a Vessel When Hove To Under Storm Sails

This depends upon the draft. A vessel with a deep keel or great draft will drift from a mile to a mile and a quarter per hour in a heavy gale, while shallow, round-bottom craft will be borne away at the rate of nearly two miles per hour under like conditions.

How to Heave To Small Vessels of 25 to 50 Feet in Length, Under Storm Sails in a Moderate Gale

The sloop *Xora* behaved surprisingly well under a small storm-staysail-tack set up over the stem with the sheet to windward and close-reefed mainsail with the sheet well in, the helm being half down.

The yawl *Sea Queen* went through a moderate gale under a storm jib with the sheet to windward, single-reefed mizzen, and the helm a little down. On another occasion she lay to even better than in the former case under the storm-staysail with the sheet to windward and a close-reefed mainsail, the helm half-way down.

When trimmed in this manner vessels will range ahead a little and make about four points leeway. But it is surprising to see how nicely they will ride over large combers, at the same time remaining comfortable and dry.

A small vessel hove to under a sea anchor and riding sail is comfortable and dry. She is out of danger from shipping seas and needs little watching. This will give the captain the chance of a night's rest.

The Best Kinds and Dimensions of Sea Anchor Suited to Different Sizes of Vessels

In the *Tilikum*, owing to her light draft, I used a sea anchor made of an iron ring 22 inches in diameter and a bag 4 feet in length. Riding to this the little vessel weathered sixteen heavy gales without shipping as much as a bucket of water at one time. The same sea anchor I employed for crossing the dangerous bar near Melbourne and also in the demonstration at the Sumno bar, New Zealand.

In the *Sea Queen*, which had greater draft, I increased the dimension of the ring to 26 inches, while the length of the bag was not altered. To this sea anchor she lay splendidly in heavy gales, and even rode the tremendous waves of the typhoon in style until the bridles broke. I am quite sure that, had the gear been stronger, the tiny craft would have weathered the typhoon without a hitch!

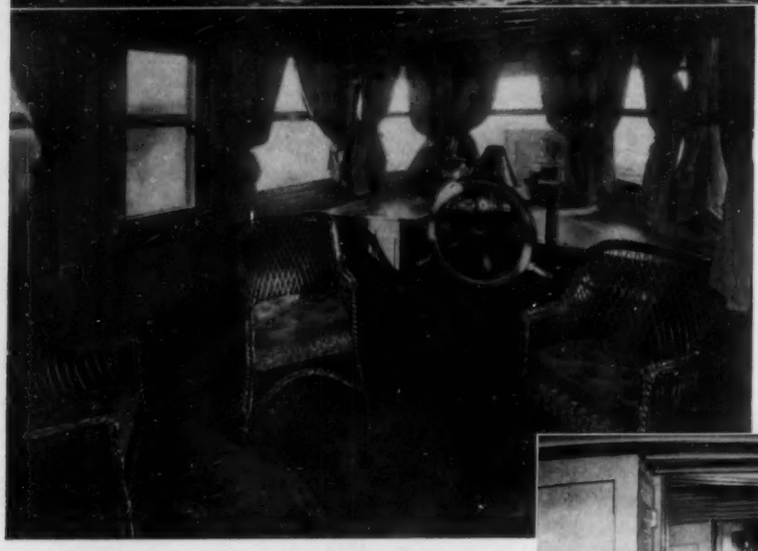
I should, therefore, recommend for boats and yachts up to 30 feet in length sea anchors made of a conical bag with a round mouth, and for vessels from 30 to 50 feet in length a square mouth. It makes, of course, no difference in principle whether the mouth be round or square as long as the bag is fairly deep and the diameter of the mouth large enough to suit the size of the respective vessels. My only reason for choosing a sea anchor with a round opening in the case of a small vessel is the consideration that there is less room to work. The iron ring style is ever ready, besides involving less trouble when put out.

There is still another style of sea anchor, which is especially useful when surf breakers are crossed in a small boat. This type I claim to be my own invention, having constructed the same and experimented with it for the first time when on the *Tilikum* voyage. Instead of the iron ring, one made of strong, flat wood is employed, weighted at one side with a piece of lead just heavy enough to cause the ring to tilt up when put into the water. The canvas bag will then quickly fill with water and the whole sink to the required depth.

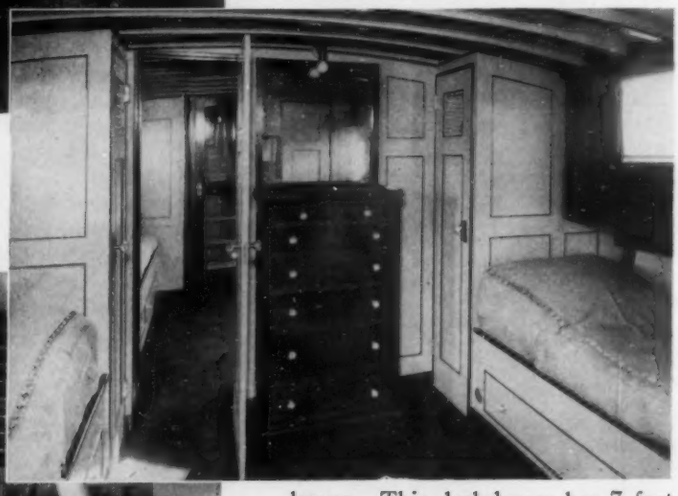
This style avoids the necessity of using a float and line, and facilitates readier handling; besides which, the wooden weighted ring will skim over the water when hauled in by the tripping line without the danger of the latter becoming entangled with the anchor rope. The iron ring, on the other hand, is liable to sink too deep and get foul of rocks or other obstacles hidden in the shallow surf. However, for long voyages and in deep water I recommend the iron ring and

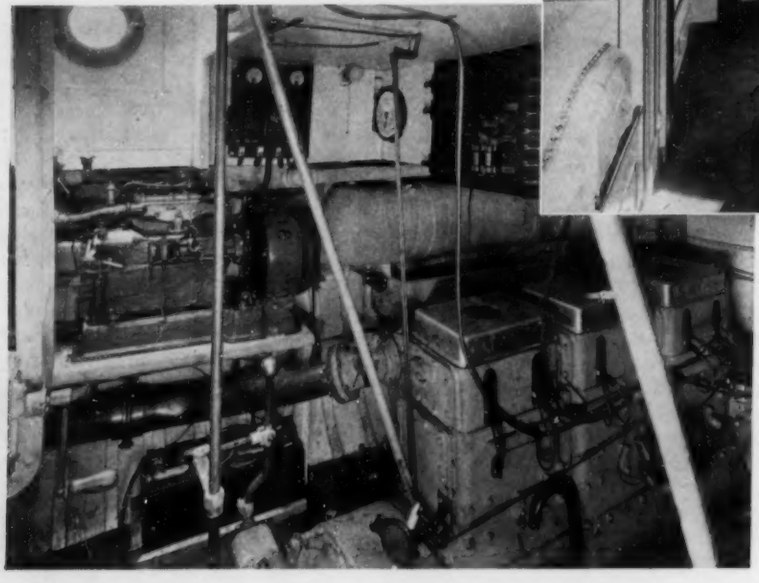
(*Continued on page* 126)

Intrepid III, a Moderate-Sized Express Cruiser



Interior of deck house of *Intrepid III*, showing inside control. The boat can also be handled from the bridge. Right—One of the two connecting after staterooms. Below—Engine room, showing installation of two 6-cylinder Van Blerck motors, which drive *Intrepid III* 18 miles per hour.





MR. WARREN SOMER'S new cruiser, which was launched at City Island in December and which started South the day after Christmas, is quite an unusual boat and shows the trend of modern design in boats of this size. Considering the amount of accommodations in her, it is hard to realize that she is only 57 feet long and 12 feet 10 inches breadth of beam; for she has two large double staterooms, one for the owner and one for guests, and an enclosed deck-house which makes an excellent living room as well as pilot house. This deck-house has 7 feet head room and is worked into the raised forward deck.

Intrepid III was designed by Thomas D. Bowes of Philadelphia, whose work in the power boat and large yacht field is well known. She is equipped with two of the new 6-cylinder Van Blerck engines, developing about 140 h.p., which, running at normal revolutions, give her a speed of 18 miles per hour and permit of a wide cruising radius.

A New Aid to Navigation

By FITZHUGH GREEN

Lieut. Commander U. S. Navy

THE modern yacht owner must be a pretty versatile fellow. Days are not rare when he is called upon to act the part of astronomer, mechanic, carpenter, electrician, rigger, joiner, and culinary artist.

Now the poor devil has got to be a geologist!

Nearly everything new these days can be traced either to the World War or to the discovery of King Tut's Tomb. The use of geology in coastal piloting actually did start during the war. And the finest of natural beacons we are about to discuss had their origin about the time of King Tut.

From 1914 to 1918 much coastal patrol work along North Europe had to be done in unlighted enemy waters. Every artificial beacon had been removed. Off such localities as deltas of the Ems, the Aller, or the Elbe, there were practically no natural landmarks in the accepted sense of the word. In months of low visibility few submarines or other small craft returned to base without having at some time or other been "on the beach."

Improvement in the situation came from an unexpected source. It was discovered by a resourceful British Commander that careful study of the coast line from a geological viewpoint yielded recognizable characteristics quite unsuspected. This discovery has opened the door to a rich store of hitherto neglected natural beacons.

For the well-trained pilot there are always conspicuous rock or shore formations in the area he is accustomed to cruise. Many such features are not even marked on the chart: a tree taller than its fellows; a church spire; twin humps on some hillock's crest. By long association he collects them in his memory and notebook.

The Blue Water mariner is in an entirely different boat. Be he amateur yachtsman or navy navigator, air pilot or fisherman, he finds himself time and again confronted by some irregular and totally unfamiliar contour looming through the mist ahead. Hopefully he turns to his chart, to his Coast Pilot or Sailing Directions, only to find, to his dismay, that no mention is made of anything particularly significant thereabouts.

Suppose, for the sake of example, he has come in from a thousand-mile jaunt out of the Pacific and is trying to make the hole between the islands Catalina and San Clemente. Abruptly from the California murk bursts the dark shadow of high land. An on-shore gale is threatening. It is vital to know which island this particular one is. No lights nor buoys are there to guide him. Charts and official "Directions" bearing on the situation are of not the slightest help. What shall the mariner do?

If he has mastered the rudiments —no more, mind you—of geology, the way the resourceful war commander did, he will reason something like this:

"The land ahead of me must be either San Clemente or Catalina because the two lie on a 'seismic' (earthquake) axis roughly perpendicular to the easterly course I have been steering. My handbook of geology tells me San Clemente at present is rising out of the sea. Conversely, Catalina is sinking. The contours ahead, even though indistinct, are unmistakably those of a land that is submerging. The island I am looking at must, therefore, be Catalina,"

What Is a Geological Beacon?

In the first place, for the benefit of the reader who has not dabbled in geology, this science is the study of what has happened to the crust of our earth since it began to cool off about a hundred million years or so ago.

A lot of things have happened: Shrinking wrinkled it like the parchment hide on the face of an ancient mariner. Sunshine baked it. Ice scoured it. Water furrowed it. Volcanoes shattered it. Tides and waves moulded it. Wind-blown sand polished it. Each in its own particular way.

In New England waters one sees natural beacons cut by ice often marked by artificial beacons much less conspicuous save at night.

Where land is rising beach-marks show above the tide-line cut by waves and tides in even the hardest rock. Note the dark lines just above the water.

These natural artisans are still at work. Ice has abandoned New England and Puget Sound. But rivers still run, tides still flood, surf still pounds. And, most difficult of all to believe, the land still is rising and falling like a waterlogged derelict hanging in the ground swell.

Results seem so enormous; the land is so vast, it makes one wonder at first how a pilot could possibly be helped just by studying the vague contours of, say, the New Jersey or Connecticut shore lines.

But take a simple analogy. Suppose at sea you fall in with a two-masted forty-ton vessel, and your Western friend on deck asks: "Well, who've we got here?"

You take about half a look and tell him: "Oysterman out of the Chesapeake." Or maybe, "A New Londoner after swordfish." Or, "One of the T-Dock gang in ice and salt for the Banks."

"But," protests your friend from St. Louis, "how can you tell?"

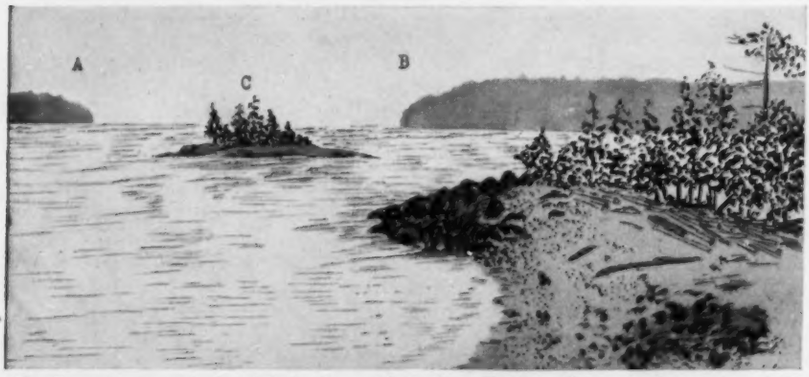
With an effort to hide your brine-scented omnipotence you briefly explain: "Why, the cut of the sails on a Chesapeake Bay half-rigger can be recognized miles away. Or, if it was a New Londoner, you point out the peculiarity of his harpoon platform; or the overhanging bow of a Down-Easter. In any case you emphasize some single noticeable feature that makes it possible for you to fix at once the identity of the passing craft.

That single noticeable feature is like the black rock or the high hill or the well-known steeple, or any of the other common variety of landmarks that the seafaring man is accustomed to observe and remember in the locality where he happens most to cruise.

Now for the geological landmark: Suppose the passerby hauls up alongside your boat and asks for a grub-stake of fresh water or salt pork. And, after he's gone, you turn to your land-locked friend and exclaim: "Talk about lubbers! What do you know about *him?*"

Which of course means nothing in Missouri lingo. So the question comes back with unabashed promptness: "But how was he a lubber?"

"How? Oh, Holy Mackerel! Why, he was raw in fifteen different ways. Any one of them enough to condemn him. He came up the wrong side of me. He didn't have sea manners enough to ask permission before he came. He made me send him a line while he had a perfectly good painter in his bow. His whole deck was muck-and-gurry: not a line faked down; calking out; bilges not pumped; bright-work green; main sheet foul and half-hitched twice on that cleat. I haven't seen such a mess since the first day I tried to sail my own boat!"



Shorelines showing submerged bed of an old glacier. The ice edges once lay at A and B. At C we have the last vestige of a sinking islet. (Sketched near Seattle.)

To use geology in piloting exactly the same line of reasoning is followed. Like spotting the sloppy boatman it simply means deducing a shoreline's individual *type* from one or more bits of evidence that are unmistakable, and then placing that *type* in one's list of landmarks for the neighborhood one is cruising.

Take the elementary matter of sand dunes. There may be here and there, as on Cape Cod, a conspicuous sandy hill that stands out from its fellows. That one is like any other prominent landmark. But every sand dune in the world, high or low, round or flat, big or little, possesses certain definite characteristics that the keen-eyed navigator can read as easily as the thorough seaman reads the shipshapeness of a deck. Dunes, seen from seaward, show direction of prevailing wind. They indicate by their extent the kind of land behind them, the depth of adjacent water, and the character of local tides. They mark the mouth of an invisible river; and show the proximity of a declivitous coast.

Seen in vague contour through fog, dunes can point the way like beacons. Just as you knew the fellow who came alongside was a lubber by any one of a dozen different lubberly things about him, even so can you say: "Our channel lies to the northward because the dunes abeam show in half a dozen ways a tidal current in that direction."

Forms of Natural Beacons

It would be an impossible task to outline completely the science of geology, as well as methods for its application to piloting, in the space of a single essay. We must leave a good deal to the reader's winter study of nautical matters, as well as to his application of them the following summer.

But sufficient can be told herein to arouse the average mariner's curiosity; provided, of course, that the mariner is willing to swallow a few technical terms and prin--ciples from a business not his line. Also will he have to take our word for some things until next summer's cruise provides opportunity to try them for himself.

Here is the kind of terms that should be looked up:

Erosion—Wearing away of rock or soil or coastline by such forces as running water, ice, etc. Varies with every mile of shoreline, and should always be noted on an unbuoyed coast.

Terrestrial oscillation—Rise or fall of the coastline due to readjustment or balancing of earth masses. May be sudden, as during an earthquake; or slow, an inch or so a year, perhaps. Produces such excellent marks as raised beaches and wave-cuts, both to be described hereafter.

Fault—Break in ground level caused by terrestrial oscillation. Shows against the sky as an angle or a notch. Always a good landmark, and usually extends for some distance.

Dike—Thin rocky mass that was once a sheet of lava squeezed in between other rocks, and now sticks out in a hard prominent ridge. Along a shore filled with tumbled rocks a dike will always prove an unforgettable beacon.

There are hundreds of other names for earth features that form good beacons. Some of them will be used herein. But the four definitions given above show how simple the science is so far as its mechanics go.

Now for the beacons themselves.

There are three chief agents forever at work fashioning natural landmarks along all coastlines:

Volcanic Action, Erosion, and Terrestrial Oscillation.

In a large way the first named is the most spectacular. Mount Rainier, an extinct volcano rising from almost a level plain to more than 14,000 feet, provides a superb landmark for the entire Puget Sound system of waterways. It is frequently visible above the low-lying high-latitude mists; and its position is so accurately fixed as to give a ready check on any vessel. The value of such a check is clear to one who has ever been forced to pilot through the grotesque tidal currents of that region.

Further south the coastal range of extinct volcanoes visible from seaward continues. Many of the Olympic peaks are so little eroded that they present their original marks of violence to the observer. In California the symmetry of isolated cinder cones and lava domes is often such that as one takes a compass bearing one instinctively looks for a wisp of smoke atop them.

From a nautical point of view, there are two kinds of erosion: that which is visible only hard by and that which can be seen a long way at sea. In the first class belong the beautiful wave-cut boulders of the Oregon coast; the ice-carvings on Maine rocks; the dust-gouged bluffs of Southern California. In the second class lie more ponderous headlands arrestingly beach-marked; erosional reduplication, as along the Norwegian coastline; and such peculiar contours as have already been spoken of in connection with Catalina.

Rise and fall of the land is really, from the navigator's viewpoint, only a means to help him distinguish erosion. Coasting some portions of South Africa one may see notable series of gaunt headlands that to the average navigator are as similar as so many sand crabs. But to the geologist not one is like another. He can spot at once the characteristics of emergence or subsidence. He can show where the beach level is higher on one than on its neighbor. He can point out the "angle of repose," the cape's particular slope at its outer foreshore, which depends upon the material composing it. In this connection it is interesting to record that last year in Nova Zembla were discovered in one place a total of twelve distinct sea-beaches one above the other. Conversely, most of us have seen submerging islets in the upper fastnesses of Casco Bay.

Statistically the mariner faces 21,862 miles of coastline along the United States proper. The average number of conspicuous landmarks listed for his guidance is roughly but one landmark to 280 miles of coast!

Even this is not a fair statement of the case. Some landmarks, like Rainier, are unmistakable. Some are copiously described in the various pamphlets at the navigator's command. Rarely is one of them mentioned without emphasizing its peculiar value as a landmark. But for the means of recognition very little is usually said. Humbug Mountain on the Pacific Coast, nearly 2,000 feet high, is listed in the official "Pilot" as a *"conical eminence, rugged on its seaward slope."* To the local fisherman that

Skyline contours are always valuable beacons in times of low visibility. Can you spot a fault, a dike, and a glacier's bed in the sketch above? All are common along the Maine coast.

is sufficient. But the tramp steamer's skipper simply bestows a long and puzzled look upon the motley collection of peaks he faces, then abandons as unprofitable his guessing which is which.

With the aid of geology's axioms scarcely a mile of coastline on our country is difficult to place distinctly from every other mile. Even in the low monotonous shores of our lower Atlantic seaboard there are specific means for identifying a locality if one only applies the principles of sand shift under influence of tide and wind.

The Sand Beach Riddle

Nine-tenths of the World's coasts are lined with sandy beaches. In thick weather no coastline is so difficult to distinguish in its integral parts as the sandy one. Yet seaborne traffic along the richest industrial and greatest yachting section of our country is largely paralleled by low barrier beaches of sand.

In the early days of the development of our proposition the writer found many sceptics. On a fishing trip with one of the most enthusiastic opponents to his "misuse of science" we had occasion to point out from seaward the mouth of a small river to our companion. The latter, seeing only undulating contours of beach and dune, was naturally incredulous. But when it was explained that combination of prevailing wind and delta deposit created a visible augmentation of dune heights just to leeward of the river's invisible mouth, a convert to the idea of geological sleuthing was promptly won.

Bearing out this same general idea is the British compilation of facts about the River Mersey. Soluble clay which comes down the Ribble in one year is estimated at 400,000 tons. In the mile-wide section of the Mersey near New Brighton with each flood tide is carried 330,989 cubic yards of matter in solution! Along with this vast conveyal of sand and dirt there is an interesting peculiarity of the local tide. When the Isle of Man steamer, the *Ellan Vannin*, sank in Mersey Channel some years ago the tide carried every victim ashore to the northward of the disaster. Tidal current there is invariably north.

Now combine tide and matter and wind: If the tide carries an immense total of sand or powder along a coast and deposits it, if then the tide-stream ebbs and the sun dries what is left, and if a prevailing wind is ready to take up where the tide left off, what is the result? The result is so tremendous that a seafaring man may, in the course of his career, see land features change as do the ephemeral physiognomies of his friends. Or, in less impressive words, wither and swell like tripe in the pan.

Plenty of yachtsmen get lost in the fogs off the Virginia Capes. And while on both Cape Charles and Cape Henry stand magnificent lighthouse structures, it all too often happens that the landfall is a coast both desolate and bare. Perhaps the craft is a windjammer that has been tacking about the blue Atlantic for a month. What is more human than for her captain to be a little panicky about whether the white strand dead ahead is five miles or fifty from the entrance to Chesapeake Bay; or even to north or south of it?

Fifty ways, at least, there are of

telling; and not one exceeds the limits of simple geological maxims: One kind of grass holds wind-drifted sand in one form of dune; another in another form. Width of barrier beach behind determines height above the sea level. Entrance of fresh water from the land alters local configuration, even without revealing the exact mouth of the stream. Slow emergence or subsidence of the land mass marks significantly the strand it carries. Coastal delineation determines the force with which the tides will act. And so on. All are natural signposts for the observing mariner; and not one of them is listed in his almanac.

Ice and Water Sculpture

These two are selected from the many forms of erosion because they are commonest along our own coasts. Sand sculpture is probably the most beautiful of all; witness our great American deserts. But we must leave that for the lost cowboy to reckon upon for the present.

New England is, of course, our local classic example of glaciation. Four times the great ice ages are supposed to have overwhelmed that section of our states. Each time they took their toll from the helpless land beneath. Each time they cut splendid natural beacons from the rocks. No pilot should overlook the work of ice if ever he coasts New England.

Here, as is the case with the sand beach, we find a superficial monotony of contour. At close range there may be strikingly mammoth erratics here and there; or a terminal moraine exposed in all its nakedness by some careless river. But, in general, there is little for the average pilot to pin his attention to unless he is so familiar with the coastline that he knows each fault and ice gouge on its rugged countenance.

It is a pity more of us who are interested in the geography of our native coasts have not seen a real glacier. Once a man has stood awestruck in the presence of one of those vast rivers of solid ice that flood grandly from the Greenland ice cap, or even across the shoulders of some of our western peaks, he can never again fail to look for glacial action. There is something so terrible in the ponderous force ice carving represents that one scrutinizes New England, say, as one might view a limping soldier from the front: wondering with involuntary morbid curiosity where his wound scars are.

Attack of waves and tides upon the land is more insidious, though far less local in extent. During the war our attention was called to that classic example of sea erosion, Helgoland. A glance at the sketch gives some idea of the extensive depredations the sea has made upon this island. And while the Germans exerted desperate efforts to conserve their dwindling territory the result was as if so many sand fleas had tried to stem a flooding tide.

We recall, not so many years ago, dancing pleasantly on a pavilion that stood some distance from the waters of the Naval Torpedo Range in the lower reaches of the Potomac. A spit built up in subsequent time to such an extent that it led both tide and river currents in bold attack upon the eastern bank. Now our pleasure spot lies wreckage on the bottom. Another place a little further up had been cut away so as to disclose a bank of prehistoric shells some scores of feet above the level of the water. Any river pilot will aver he "knows" his channel by heart. He does indeed; but his memory is chiefly of geological features which the deductive mind could read at sight with proper training.

Outlines of the Island of Helgoland at different stages of its recent history. (After Hobbs.) Outline shows in each case the amount of wearing away by action of the sea.

Volcanic Landmarks

To the Pacific Ocean navigator there comes unavoidably a thorough working knowledge of the mechanics of volcanic action. By no other means can he recognize even charted landmarks satisfactorily along enormous stretches of Asiatic and Polynesian coasts. Astronomical navigation has its uses for trans-oceanic traverse. And there is no reason for the peace time traffic of the world to wander from a well-set course. But the yachtsman, the war patrol, the fisherman, and the adventurer, all take a gambler's choice for their landfall. To find at dawn a pink-tipped cinder cone on the western horizon, and know for a fact it's Jima Peak, is comfort past all words to paint. But the knowledge must come from geological configuration alone. No other source of information is definite enough to base conclusion upon without actual computation.

Survivors of our "Old Navy" still yarn about the great cataclysm on the island of Camiguin in 1871. Here, but a quarter of a mile from the peaceful village of Catarman, there opened without warning a yawning fissure in the surface of the earth. From this vent was vomited with terrifying concussion a mass of lava of sufficient volume to cover the entire city of New York to a depth of over 700 feet! Where had spread the level plain of agricultural natives, now towers a mountain close to half a mile in height, a superb natural beacon.

Our Pacific seaboard has in the past been a hot bed of volcanic activity. Earthquakes still remind both San Francisco and Los Angeles that old mother earth is not yet quite comfortably in repose. The coastline is rising and falling nearly as rapidly today as it was tens of thousands of years ago.

This last is of particular help to the navigator. In the colder months of the year there are few days when there is not a damaged visibility on that vast stretch from Point Firmin north to Flattery. All the navigator sees on such days, provided he hasn't lost his nerve and headed out to sea, is an unending procession of painfully uniform capes. For hundreds of miles they present without exception almost a common size and dull configuration. They are bluff and smooth-topped. They possess angles of repose for their declivitous faces that do not vary ten degrees in a dozen leading headlands. Discouraging for the pilot is putting matters mildly.

Yet the truth is quite another story: Scarcely a foreshore in the whole long list is not either rising or falling. And not a single one has, in recent times, risen or fallen the same amount as its next door neighbor has. In consequence this procession of terrestrial projections into the blue Pacific is just as full of varying appearances as any march of human beings.

One might mention almost innumerable illustrations. There is San Pedro Hill, on which a whale skeleton was found last year some 1,500 feet above the level of the tide. On its lovely rolling slopes are beaches where red-skin babies must have waded while Tut-ankh-amen built his gaudy tomb. There are beaches and beaches, one above

the other in military rows. And the pleasing part of it is, especially for the mariner who knows land uplift when he sees it, these same beaches do *not* occur in exactly the same way in any other section of the coast.

Nor must we stick to wave-notched shore-lines. There is a pair of rocks sticking out of the sea up by Mendocino, both about 300 feet in height, and both capital landmarks for the canny navigator. One is off Mendocino, the other off False Cape, a full five miles away. By their contours these two islets from certain angles appear absolutely identical. Imagine the tragedy, though, of missing home five miles in a January gale. Only study of the coastal geology at that point, with due regard for *"iso-static adjustment"* that is so obviously going on, can once and for all prevent the "Sugar Loaf," as it is called, from being mistaken for its twin brother.

Alaskan pilots are usually remarkably versed in the geology of the coasts they cruise. They have to do something to make up for the fog, the fearful tides, and the uncharted rocks in that hazardous region. Disenchantment Bay is exceptionally agreeable in its natural pilotable qualities. Here the great earthquake of 1899 brought about a terrestrial adjustment that elevated some sections of the coast nearly 50 feet. Had the material involved been the same throughout the area affected results would likely have been similar. But, fortunate for the mariner, prior to the quake some parts were solid, some were broken, some were mantled by glacial debris, and some had been scoured quite clean. Consequently there ensued, when movement came, several distinct forms of beach line. On a few stretches there are clean uplift-faces of varying heights, and wholly unmarred by crumbling. On others the rise is so masked by rocky rubbish that only close inspection reveals its presence. Hence for the observant pilot this particular inlet need have no artificial beacons; nor natural either, in the common sense. It possesses on its shoreline so concise a record of geographical location that nothing else is needed.

Displacement of any section of the earth's crust is rarely possible without attendant faulting. Fault lines, like other earth features, usually "carry back" into the sky-line. Thus is cruising in Puget Sound or along New England made easier despite the fog if one is observant of this form of natural guide-post. As a fair example of the whole proposition, faulting is, however, not exactly appropriate. It is too localized, and should really be classed with the conspicuous rock or peak. It is mentioned only because there are so many spots along our own coastlines where local faults stand out. The rugged Labrador above Belle Isle is notable in this respect. In the prevailing fogginess up there no pilot can afford to ignore such natural aids to navigation.

How to Go About It

All this may sound very high-brow to the practical pilot. It may seem far-fetched. The examples described may appear too widely scattered over the globe ever to do the local seafarer much good. The language may sound too much like going to school again to think of burdening a pleasant vacation with it.

But be open-minded. Do you recall the time Congress had its great debate about appropriating $30,000 for developing a fool gadget got up by a young man named Alec Bell, which he called a "telephone"? After a lot of long-winded use of high-grade technical language one Congressman suggested that half the appropriation be directed to an investigation of mesmerism! Today the wife doesn't bother much about static electricity and magnetic fields; but she certainly can do wonders with her little phone.

So don't be discouraged when we talk of "iso-static theory" as an aid to keeping off the rocks. Obtain a simple book on geology. Get the general idea of the science cleared up. Then find out from the book, or from the local high school professor, what the general geology of your local coastline is. Maybe the professor will point out some of the elementary formations.

After that try geology from seaward. See how many faults and dunes and dikes and raised beaches you can spot. Notice the extent of each. Try to connect the fault or dune with the force that caused it. Forget the kind of time your chronometer keeps, and think in geological time: a thousand years as a unit. Picture the glaciers that once shredded the Maine coast; or the winds that built sand piles back of Provincetown; or the tides that spread their spits and barrier beaches off New Jersey further south.

The next step is to imagine the landscape barely visible through a haze of fog. (Perhaps you won't have to imagine it!) That is to say, look for skyline contours. See if the features you have been recognizing don't show up against the sky. Try them from different angles. This is particularly important. For one of the advantages of the scheme is that it doesn't make much difference from what direction one is looking at a geological beacon, so far as ease of recognition goes. Quite the opposite from any other means of recognizing a land mass.

* * * * *

The winter is with us. Fragrance of marline, *lap-lap* of little waves against our stem, music of creaking block and tackle, are still some months away. What better time could there be for a dip into something new—something that may save the helpless keel next summer?

Seen through haze the average series of headlands look alike to the navigator. To a geologist they are as different as the faces of so many men.

A Bermuda Race for 1924

Interest Keen for Another Race to the Island This Summer

THERE will be another Bermuda Race this year! Before deciding on a race this Summer to the group of little islands lying in the Atlantic about S. E. x S. of New York, a letter was sent to each owner who had entered last year, to those who owned yachts of a type that were particularly suited for such an event, to get their opinions on the advisability of sailing the race again this year. They came back strong for the Bermuda course. None of the other courses suggested met with much favor, and as eight of those wanting the race sent in actual entries, we are going ahead with the event. From now on, everyone on the committee will work hard to make the race as big a success as it was last Summer, when twenty-two yachts, the biggest fleet in any ocean race of this length, started from New London and finished off St. David's Head.

Eleven entries have already been received—and the event has hardly been announced. So it looks promising for another big fleet. There are a lot of yachts eligible for the race and many owners who want to go. But as such a race takes a lot of preparation, it is up to those who intend to go to make up their minds early, enter their boats and begin to "fit 'em out" for this race in June. Those who went last year will have less to do in the way of preparation than those who did not, as they are already equipped with most of the light sails that will be needed, extra gear, and the like.

The date selected for the start is Saturday, June 21st, a little later than the start last year. This gives a little more time to fit out and yet it will get the yachts back here by July 5th or 6th. As July 4th is Friday this year, and a holiday, it will mean that a boat taking 15 or 16 days for the passage there and back will keep her owner and crew away from their offices only ten working days—and they'll be days well spent. If you don't believe it ask anyone who went down there on the last race.

The course will be the same as last year, from New London to St. David's Head. New London proved a good starting point, and is about half way between New York and points north of Cape Cod around Boston. Also, there will be the added attraction this year of the Yale-Harvard boat race at New London the day before the start, and a big fleet will be at New London. There will also be a class for power boats this year. While all the conditions have not yet been drawn up, and while some minor changes may be made before the full conditions are announced, the following are the general rules governing the contest. The Royal Bermuda Yacht Club will handle the race at the Bermuda end, as it did last year with such satisfaction to all hands.

General Conditions

The conditions have been kept as simple as possible, the principal thought being to limit the race to bona-fide cruisers and those that are perfectly qualified to go to sea. The committee will see that all entries live up to the spirit as well as to the letter of the conditions.

1. Members of any organized yacht club in the world are eligible to enter, provided their boats conform to the terms and spirit of these conditions. The race will be open to all yachts propelled by sail, not over 75 feet over all length, in three classes, as hereinafter stated. The boats must be substantially built, suitable for extended cruising and must conform to the following requirements: To be a seaworthy type, strongly rigged and properly ballasted, with closed cabins and watertight cockpits. The combined length of the fore and aft overhangs shall not exceed one-third of the boat's over all measurement. Boats with glass cabin houses will not be permitted to enter unless protected to the satisfaction of the committee.

CLASSES—In order to keep together boats of as nearly the same size as possible, the following classes have been provided:

Class A — Schooners, sloops, yawls and ketches, 30 to 52 ft. O. A. length.

Class B — Schooners, sloops, yawls and ketches, 53 to 75 ft. O. A. length.

A class for larger yachts will be arranged if two or more boats enter and start.

A class for power boats from 35 to 50 ft. O. A. L. has been formed, the boats to use both sail and power. This class is to encourage a type of power boat with small rigs which has been developed recently for coastwise and sea-going work. The committee is at work on measurement rules for this class and will announce them later.

SAILS—A boat may carry her regular working sails and there is no limit to the light sails that may be carried.

EQUIPMENT—Boats must carry a complete cruising outfit for the safety of the vessel, consisting of anchors (2), cables or chains (2), compasses (2), and suitable binnacle, lights, lead lines, charts, navigating appliances, etc. Two portable fire-extinguishers must be carried. One life preserver, properly approved, for every member of the crew must be carried and two large life rings equipped with water lights shall be carried on deck, handy to the helmsman. Stores sufficient for the crew for three weeks must be carried and at least 12 gallons of water per man, in suitable tanks or casks.

TIME ALLOWANCES—Time allowances will be based on over-all measurement, and the allowances used will be figured from the time allowance tables of the Yacht Racing Association of Long Island Sound and not the arbitrary figure as was used last year. If sloops are entered against schooners, ketches and yawls, the latter three rigs will be rated at 95 per cent. of their measurement, as a differential between the rigs.

PRIZES—There will be a first prize in every class and a second prize if four or more boats start. YACHTING offers a prize to the first boat on corrected time, all classes together.

LOGS—It was noticed last year that some of the logs the yachts kept were not very complete, and this year each yacht will be required to turn in a copy of her log within thirty days of the finish of the race, and a prize will be offered to the navigator turning in the best log of the race.

Entries Received to Date

Yacht	Rig	Owner	O.A. Length
	(New Sch.)	Lawrence Grinnell	67 ft.
Primrose IV.	Sch.	Walter H. Huggins	50 ft.
Gauntlet	Sch.	A. E. Dingle	50 ft.
Wanderer	Sch.	David Henwood	38 ft.
	(New Ketch)	Gordon Price	42 ft.
Dainty	Yawl	A. A. Darrell	37.5 ft.
Sea Call	Ketch	Dr. L. Nietsch	37 ft.
Arcenciel	Sch.	M. R. Smith	55.5 ft.
Malibar V	Sch.	John G. Alden	49 ft.
Harpoon	Sch.	Kenneth Stevens	40 ft.
Memory	Sloop	R. N. Bavier	59 ft.

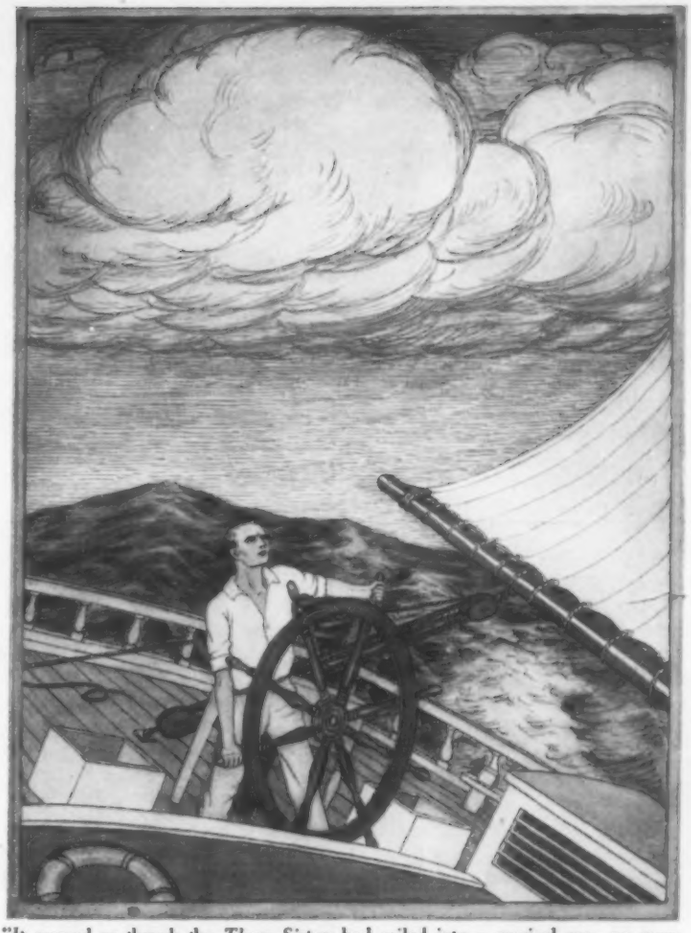
The Race Committee is composed of the following: C. D. Mower, Robert N. Bavier, Samuel Wetherill, John G. Alden, E. H. Tucker, W. W. Nutting, C. A. Marsland, K. F. Trimingham, Bermuda, and H. L. Stone, Chairman.

A Flier in Logwood

The Confessions of a Would-Be Merchant Prince

Transcribed by
JOHN T. ROWLAND

Illustrated by
E. H. and D. S. SIMPSON



"It seemed as though the *Three Sisters* had sailed into a magical sea—no more dull clouds, lead colored surges or cold, stinging spray."

THE storms of the Roaring Forties were left astern when we crossed the Gulf Stream in about the latitude of Cape Henry. After that it seemed as though the *Three Sisters* had sailed into a magical sea. No more dull clouds or lead colored surges, no more cold stinging spray that cut the face like particles of steel, no more crashing coamers to burst over the weather bulwarks and turn the waist into a swirling pool fit only for polar bears or seals, and (most important of all) no more head winds!

Every New Englander looks upon east wind as a sort of a painful necessity, like paregoric or the village grouch, and it is difficult for him to imagine anything pleasant connected with it; so we hyperboreal sailors had a surprise coming to us the day we ran into the edge of the Northeast Trades. Fancy driving across the Stream in a blizzard with the mist rising like steam from a cauldron off the water, then losing the breeze and sloshing round for three days in a great lump of a sea with everything banging and slatting until it seemed that the ship was beating herself to bits—and then all at once picking up a nice little breeze out of the east'ard that increased gradually as one advanced, until at the end of twenty-four hours you had a perfectly gorgeous full-sail breeze, with sparkling clear weather and warm, sunny skies! That's the Northeast Trades for you, and, as the skipper said, it almost made a fellow repent of cussing the east wind from hell to Hebron off Cape Cod.

Old Gorgeous was our skipper. His real name was George and before he became a sailor-merchant he had been a successful real-estate man at Lynn. But like many another Massachusetts boy, he was reared on the beach at Nahant (I never could get his way of pronouncing it) and the transition from the catboat of his youth to the three-masted schooner he now commanded was not so great a jump as one might think.

No doubt Gorgeous would have been up against it if he had had a shellback crew and had been obliged to do things in a strictly orthodox fashion, but to us he could sing out: "Hey, Blisterhands, take another pull on that foresheet and see if it will keep her handier to the wind," or, as when he tried to tack ship in Vineyard Sound and found there wasn't room: "If any of you boys have a bright thought on how to get out o' this, say it, and say it quick!"

We didn't think any the less of him for this, for we were not overburdened with traditions ourselves. Three of the gang had never seen salt water outside of Utah, while the Hog, the Financial Expert and myself were only what might be called semi-pros—never having gone to sea for a living.

It was the Financial Expert who was responsible for the expedition. He came home from a trip (*de luxe*) through the West Indies and expatiated upon the money to be made by poking into out of the way corners and purchasing island products for cash. Logwood, for example, could be bought for $8 a ton on the beach and sold to dye works at home for $30. And that was only a beginning!

This doctrine was what earned the Financial Expert his name, and it roused some atavistic impulse in Old Gorgeous to emulate the deeds of the doughty merchant-princes who were his forefathers. Having the ready cash and learning of a "Scotia-built" three-master which was to be put up at Marshal's sale, he placed his business in his partners' hands and invited the rest of us to join him in the venture. For our greater convenience he "carried" our shares until we should be able to pay for them out of the anticipated profits—which was fair enough, as one might say.

The duties of mate fell upon the Expert, the Hog presided over the galley, and we were all common sailors when it came to hauling on a rope. We learned some of the differences between handling a coasting schooner and a yacht before we got clear of Boston Harbor. The *Three Sisters* seemed to want the whole of Massachusetts Bay to come about in, but once you got her swinging no power under heaven would bring her back. The first time we tacked ship she filled away and kept right on swinging off until she had the wind over her

quarter. In a lump of a sea, on the other hand, she refused to tack at all. Our progress out past the Graves was a thing fearful and wonderful to behold. Three tugboats kept circling round us tooting their whistles while their skippers cajoled us with threats and entreaties to accept a tow. It seemed that we were jeopardizing navigation.

However, we got to sea at last and were thankful that the Atlantic Ocean was broad. With plenty of searoom she proved an easier ship to handle than any yacht. Her gear was simpler and everything was big enough so that you could get hold of it with two fists. Moreover she sailed on her bottom instead of on her ear and it had to be blowing a real breeze before there was any need to reef. Unlike most coasters, we had two people on board who could navigate; once we struck fine weather one could be seen decorating the top of the house, with a sextant in his fist, at almost any hour of the day.

On the fifth morning after entering the Trades, Great Inagua Island, at the foot of the Bahamas, came in sight and we swung her off for the Windward Passage—why so called God alone knows, since it is to leeward of everything in the West Indies except Cuba. By night Mole St. Nicholas was in plain sight on the port bow and at midnight we hauled up for the Gulf of Gonaive, that wide bay on the west end of Haiti which lies between two projecting mountain spurs.

"And then the wind fell light." By morning the *Three Sisters* had sagged back into the Windward Passage. The Trade Wind, freshening in the forenoon, gave a slight draft to her topsails and set her up again into the tranquil waters of the bay. Then the high hills to windward shut it off.

Next day, which was the 10th of December, we made eight miles on our course. We were bound to Gonaives as a first port of call, and when evening came had only succeeded in opening out the long indentation at whose head it lay. The shores were fringed with mangrove thickets, which spoke eloquently of the perennial calmness of those waters, in contrast to the windward coast of the island.

"I don't know," said Gorgeous, doubtfully sniffing the weather, "but what we'll have some trouble ever to work up to that port."

But during the night the Hog and the Mormons lowered the powerboat and got it out ahead on a long line. A passing breath of air off the bay gave the *Three Sisters* bare steerageway, and this the powerboat was just able to sustain.

You could throw a chip over from the bow, go into the fo'c'sle and get a stick of plug out of your bunk, stroll leisurely aft along the deck, stop and pass the time o' day with the man at the wheel, and meet that selfsame chip face to face at the weather counter. Still, as Gorgeous said, it did not matter how fast she went so much as in which direction. We anchored off Gonaives the following afternoon.

The beach was piled high with reddish brown stacks of logwood. Bright and early next morning Gorgeous and the Financial Expert went ashore to buy as much as the vessel would hold. The rest of us were rather sorry that we had found what we were after so soon.

At noon the boat went ashore as per orders for the skipper. He failed to appear, and the boat's crew found him an hour later perspiring profusely in the private office of a local banker. Gorgeous waved them away and promised to follow shortly.

At four o'clock he was similarly occupied with a merchant of importance, and at six he was closeted with a mulatto who was the principal man of laws of the place. At half-past eight he and the Financial Expert returned to the ship sadly worn and wearing harassed expressions in odd contrast to the happy confidence with which they had gone ashore.

"Buy the stuff? Of course I can buy it!" he exploded in reply to our eager questions. "But everybody in Haiti has a lien on this —— logwood and we can't move it off the beach until they are all paid in full!"

It developed that the total amount of the liens far exceeded the value of the wood. The Financial Expert wrangled for two days more, during which the skipper irately refused to set foot on the beach.

In the end even the Expert threw up his hands, and we started to heave up the hook. When the fellow who owned the wood heard our windlass clanking he came out aboard and wrung his hands and wept, but there was nothing we could do. In no very charitable frame of mind we put the port of Gonaives slowly—all too slowly—astern.

For three days we drifted on up the bay towards Port-au-Prince, the capital of Haiti. Only in the mornings was there any breeze, and then the air was light and principally ahead. If the *Three Sisters* had not been an unusually smart vessel we would never have got ahead at all. However, when she passed the end of Gonaive Island and had the city of Port-au-Prince in sight an unsuspected current took hold of her and began to carry her towards the southern shore of the bay. It ran strongly all night and the water was too deep to anchor. When morning came we were 'way down to leeward in the region of Miragoane.

We spent a full week in this easy-going treadmill of a practical-joking nature, and at its end were further from our port than at the beginning.

"She'll never get there this way; that's certain!" the skipper proclaimed at last.

"After all," said the Expert, "we're not *obliged* to go to Port-au-Prince at all. There are plenty of other places where logwood can be bought."

So it came to pass that Port-au-Prince was abandoned as our destination and the *Three Sisters* was soon running off with her big squaresail hanging from the yard on her foremast to catch what little air stirred, and her booms held back against the lee shrouds by their tackles. We had about made up our minds to try our luck in Jamaica—partly, perhaps, because that island was dead to leeward—and were discussing the matter with such heat as the competition of the weather made possible, when the attention of all hands was attracted by a boat which came out from the shore on our port hand.

She was a big open lugger and possessed auxiliary power in the form of four blacks who swung at their oars in the style of old-fashioned man-o'-war's men. A thin chap in khaki sat under an awning in the stern and looked us over. When the boat ran in alongside the negroes tossed their oars with a flourish and the white man set his foot on the shoulder and then on the woolly head of his stroke oar quite as a matter of course while he climbed up over our side. The *Three Sisters* was light, and even in the waist her sheer strake was quite high out of water.

Our visitor introduced himself as Von B——, a former consular officer, and inquired with Teutonic directness who we were and what was our business. He said that he had noticed our futile efforts to work up the bay and concluded the skipper must be a stranger to these waters. Since we had nothing to

conceal Gorgeous told him our story in a sentence, and the Teuton instead of laughing showed an immediate and surprisingly keen interest in the enterprise.

"It is a good idea—excellent!" he exclaimed, "but you should have some man down here who knows conditions." Then he told us that if we had dealt solely with the bank at Gonaives we would probably have gotten our logwood without any difficulty, and quite likely without even knowing who actually owned the stuff.

"But it is no matter," he concluded; "there is plenty more."

By this time we were somewhat on our guard, but to the surprise of all hands Von B—— made no attempt to press an advantage. "I have a little wood in here at Jeremie," he said indifferently, "but you had better go elsewhere. It is a dangerous place for a sailing-vessel to lie."

Gorgeous thanked him and asked him to have a drink, which, however, he graciously declined. This appeared to end the interview, for with expressions of encouragement and good will he went over the side to his boat.

"Hold on," called the Financial Expert. "Can't you tell us some good place to call for a cargo?"

"Why certainly," came the instant response. "There is Port de Paix on the Windward Side. I believe they have a great lot there and you could buy the small amount you require very cheap."

He waved his hand and his black men dipped their oars.

"Remarkable fellow!" said Gorgeous. "Wonder what his game was." He was not to know that until he got back to the States and found a neatly written letter from Von B—— offering to serve him in a business capacity as agent on future voyages. He certainly knew how to play his cards.

We were now all agog over Port de Paix. The chart showed the place under the lee of the island of Tortuga, on the north side of Haiti, some 75 miles east of Mole St. Nicholas. The difficulty, from our point of view, was to get to Mole St. Nicholas, for we should have to beat up the whole length of the Windward Passage against current and wind. The only way to do this seemed to be to stand well over towards the Cuban coast, work along under its lee to Cape Maysi and then jump across. Accordingly, just as the sun was sinking into a roseate bank of fluffy clouds on the horizon we stood out past Cape Dame Marie and laid the *Three Sisters* by the wind.

Night came down, sudden and very dark. The further we stood out into the Passage the lumpier grew the sea. The wind, too, increased. It swooped down from the northeast in fierce, short squalls whose only warning was an obscuration of the stars. Soon it would be piping through the rigging and with a crescendo roar the rain would rush across the sea to windward and engulf us in a torrent. Then it was pitch dark and we

"And then the wind fell light."

would fall over each other groping for topsail sheets and clewlines.

By the time the ship righted again the squall would be past and old Gorgeous would shout from the poop to "sheet home those —— topsails!" This sort of thing kept up throughout the night and there was little distinction between the watch below and that on deck, for no sooner had one turned in than a frowzy head would be thrust through the forecastle door and a voice sing out: "Turn out, loafers; here comes another squall!" Still, it was warm and we were none of us sleepy, thanks to our long and lazy sojourn in the Gulf of Gonaive; so we did not mind it very much.

Morning dawned at last. A hazy outline of high hills loomed through the dawn ahead and we all turned out, eager to see where we were. Judging by the course steered we should have fetched the Cuban coast in the vicinity of Guantanamo, but somehow the land did not have the right look. While the light grew stronger the *Three Sisters* forged bravely ahead. At length the sun shot up like a big, red and very bright balloon. The skipper mounted the cabin top with his binoculars and took a long look.

Right ahead an old stone tower stood upon an eminence of the land. Gorgeous studied it, looked at his chart, read the Sailing Directions and then studied the shore again. Finally he thrust his glasses back in their case and jumped down off the house.

"You birds did some grand steering through the night," he growled. "That's Santiago de Cuba, and we're thirty miles to leeward of our course!"

The fact was that in crossing the Passage we had barely held our own with the current, but I suspect that the leeway made during the squalls had a good deal to do with this sad performance. One thing heartened us, however. Close in under the coast the Pilot Chart showed a counter-current running northeast. If we could keep in this and at the same time draw down a more favorable slant of wind off the hills we might yet be able to make some headway.

It was a magnificent coast and we enjoyed studying it close at hand. Georgeous tacked ship and we stood about to skirt the shore. But all too soon it became evident that the *Three Sisters* would not lie within four points of the trend of the coast. As the day advanced she sagged off further and further into the Passage. At noon we tacked and stood in for Cuba again and when we got back under the land at four o'clock the stone tower of the morning was still in sight to leeward. Then and there we learned the cardinal principle of navigation in the West Indies: Never let yourself get to leeward of your objective.

The night brought better success —though it would not have enthused the average yachtsman— some twenty-five miles made good, thanks mostly to the counter-current, which seems to run strongest at night. Off Guantanamo at dawn we spoke a small ship of the Navy. Those aboard her seemed very much surprised at seeing a schooner attempting to beat up through the

Passage, but wished us good luck.

Thereafter the coast took a more favorable trend and all hands had grown so used to measuring our progress by inches that it seemed like flying when we could actually count ten miles to the watch. At any rate there was no danger of being becalmed, and that was something!

The day passed pleasantly with the wind freshening so that we had to reef the spanker in the afternoon. The *Three Sisters'* sails set remarkably well for a coaster and, thanks to the gas engine winch, we could get the sheets down hard. She had quite a fine entrance and a very long clipper bow, as though some one had grabbed her by the snout and pulled it out. So while she shouldered through the big swell without even a drop of spray falling on deck, she nevertheless made appreciable progress, and if only she had gone "where she looked" we would have cleared the Passage in a few hours.

With Cape Maysi abeam the mate became enthused and insisted we stand across. Indeed the vessel was pointing well above Cape St. Nick, our turning point on the Haitian shore.

"Look there!" he cried suddenly, and pointed to a sail well behind us and a good deal further offshore. "If that chap can lay it from where he is we certainly can do it easily. It's foolish to stand on this way any longer."

Perhaps what influenced the skipper to agree was the fact that the wind, due to some cyclonic disturbance further north, was coming fairer than we had any reason to hope. It seemed foolish not to take advantage of this God-given chance. So he swung her off a point and gave orders to start the sheets.

As we drew out from the land of Cuba at a famous rate it became apparent that we were converging upon the other ship, which looked like a rather small four-master. We all regarded her with admiration and wondered how she managed to lie so close to the wind and yet go ahead so fast.

In an hour we were close together. She hoisted the Danish ensign to her peak. Her sails were all shaking at the throat and yet she crossed our bows with a good margin to spare. As we passed under her broad stern the puzzle was solved by the measured "ker-chug, ker-chug, ker-chug" which came to our ears.

"Diesel - engine auxiliary," growled the skipper. "It's a —— pity we haven't got one here!"

"Yeah, and have to carry three watches on deck and in the engine room, like a steamer?" the Expert retorted. "If those farmers in Congress could only be prohibited from passing laws for the extermination of the American merchant marine——"

"Oh, dry up," said the Hog with a grin. "We're having a nice sail; what more do you want?"

By mid-afternoon it became certain that the *Three Sisters* would not weather Cape St. Nick. There was too much sea to tack ship, so we wore around and stood back for the Cuban coast. Nightfall saw us back under Maysi, a few miles behind the place we had left eight hours before.

We were at the neck of the bottle and all hands realized now that it had become a serious question whether we would ever be able to beat a way through. Perhaps in a merchant vessel with the customary methods of procedure the thing could not have been done. Gorgeous, however, proposed a scheme which appealed to our sporting instincts. It was that we should clap full sail on her and drive her like a yacht, making short tacks until Cape Maysi was past. This meant fast work in the squalls with all hands on deck all night; but we gladly agreed. After all, the principal risk was his.

Accordingly we wore round close under the coast (so as to be on the outward leg when the experiment began) and shook the reef out of the spanker. We jammed all the sheets down hard with the aid of the winch and then began somewhat gingerly to set the topsails. Hardly was the main sheeted home when a clear squall hit the old girl and laid her down till the brine spurted in through the freeing ports in her bulwarks. The shrouds snapped and twanged under their fearful strain and the running rigging all stood like steel rods. And still she kept going down.

We expected to have the masts fall about our heads. "Come up out o' that!" yelled Gorgeous from the poop. The man at the wheel meanwhile was clawing the spokes hard a-weather.

Slowly the *Three Sisters* staggered up. By the time she lifted her bulwarks out of water all three topsails were shivering in the wind, but she was going to windward as few yachts have ever done.

Gorgeous hung on grimly to his kites and presently the squall passed over. No harm had been done except in the galley, where the Hog, grown careless by weeks of sailing almost on an even keel, had neglected to secure his gear. But except for the loss of our midnight lunch the damage was slight.

Here at the mouth of the Windward Passage there is a violent, quick sea. Hitherto we had found it impossible to tack ship because as soon as the vessel "came up and looked at it" she lost way and refused to go round. But wearing ship means losing distance, so Gorgeous determined that tack she must. When the time came the mate stationed one man at the foresheet and himself took charge of the jibs with the rest of the gang.

The schooner was swung off till she had everything rap full and was going through the water like a race horse. Then: "Ready about—Fly your head sheets!" bellowed old Gorgeous from the poop.

"Hard a lee!"

With a thunder of thrashing canvas the *Three Sisters* swooped up to meet the seas. She struck one fair and flung the spume an impossible distance from either bow, then dropped like a plummet into the trough.

Before we knew it she had sternway on. So great, however, had been the momentum of her swing that her bow fell away to port, as desired, and the sails began to fill.

"Ease all sheets!" yelled George. "Ease all sheets or you'll dismast her!"

But we, forward, had been flung off our feet when she hit that sea and stopped. Moreover, the mate's gang had caught a turn of what were now the weather jib sheets, in order to help her come round; and the result was that the ship was caught with sternway on, her sails filling harder every second and the sheets down hard. She lay over till her deck was like the roof of a house.

What kept her from rolling down and lying on her side I do not know, for like all cargo schooners she was almost flat on the bottom for the greater length and of course had no ballast on her keel. In fact, she had no keel as a yachtsman understands that term, but only a shoe eighteen inches deep. What little ballast she had was all inside, against the keelson.

Perhaps it was the buoyancy of the broad counter, which only began to bear when she was well over, or perhaps it was dumb luck; but at any rate the old girl lay down at

(*Continued on page* 160)

Ripple, a new Diesel-engined power cruiser at Jacksonville, after her voyage across the Atlantic in November.

Ripple, a New Diesel Cruising Yacht

A NEW yacht that has been added recently to the rapidly growing fleet of American Diesel powered craft is the *Ripple*, owned by Mr. Clifford M. Leonard, N. Y. Y. C., and designed by Messrs. Cox & Stevens.

In appearance this yacht is typical of the numerous large Diesel vessels designed by this firm. She has a straight stem, elliptical stern, and a continuous, rather lively sheer, good freeboard, and a long central deckhouse of steel. For power she has two 300 H.P. Diesel engines, which give a speed of 12 knots at sea, while she has sufficient fuel capacity for a cruise of 6,000 miles.

The dimensions of the *Ripple* are: l.o.a. 133 ft. 9 in.; l.w.l. 125 ft.; breadth of beam 23 ft.; draft, loaded, 9 ft. 6 in. As the controlling ideas were to secure for the owner comfort and safety at sea, and as extended voyages are to be made, frequently in the tropics, the designers have paid especial attention to strength, disposition of weights and seaworthiness.

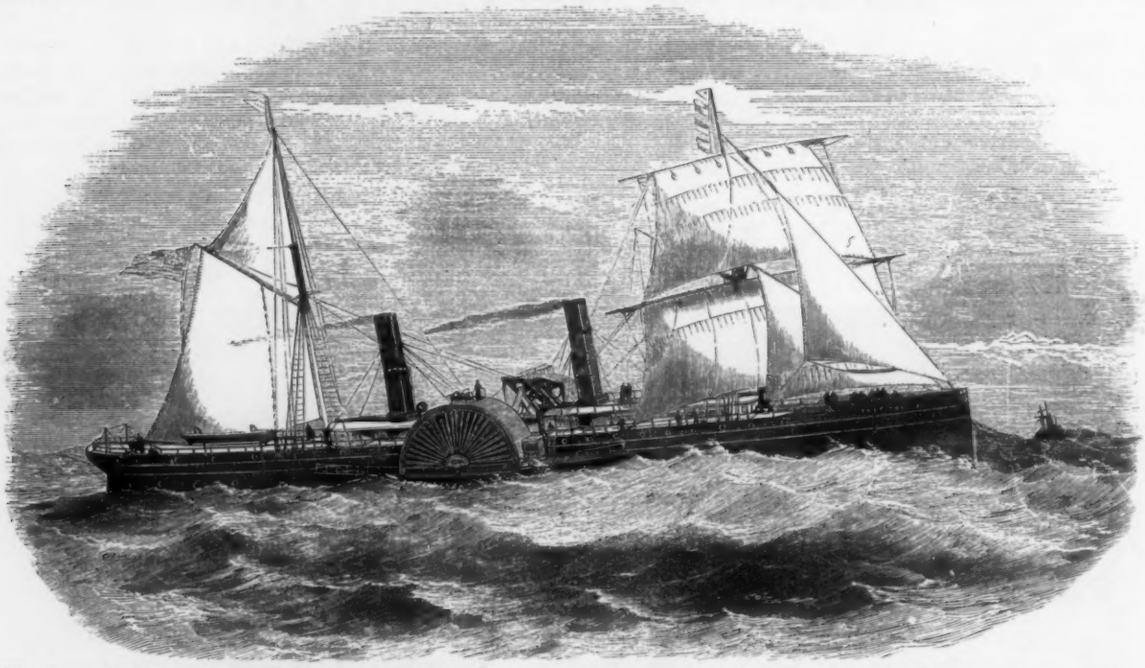
Quarter deck showing enclosed lounge in deck house (upper). The main saloon of *Ripple* looking out on the main deck (lower).

The staterooms are furnished with unusual taste and simplicity (upper). A corner of the library in the deck house (lower).

The *North Star*—a Famous Steam Yacht

Seventy Years Ago She Was the Pride of Commodore Vanderbilt and Was One of the First Steam-Driven Yachts to Cross the Atlantic

THAT yachting was quite a bit different seventy years ago from what it is today was brought home to us forcibly some weeks ago, when one of our readers sent us a copy of an old magazine that gloried in the name of *Gleason's Pictorial Drawing Room Companion.* The date was August, 1853, and it contained a wood cut and an account of the new steam yacht *North Star,* owned by Commodore Vanderbilt, which was at that time the last word in steam yacht construction.



Wood cut of the steam yacht *North Star,* owned by Com. Cornelius Vanderbilt and built in 1853. In that year she crossed the Atlantic in 10 days, 8 hours, being, probably, the first American steam yacht to make this passage.

It is impossible to say just how accurate the drawing is, and while it is undoubtedly correct in the main essentials, it is probably deficient in many of the details. Not less interesting than the picture itself is the description given in the magazine. National pride sticks out everywhere in the article, and the fact that she was all American, and therefore better than anything that had been produced elsewhere, seems to be an immense source of gratification to the author. We print it exactly as it appeared:

"This splendid specimen of American naval architecture has proved one of the most perfect-modeled steamers, for safety and speed, afloat. In her first trip she crossed the Atlantic in ten days and eight hours. Her owner, Commodore Vanderbilt, is a merchant prince and ship builder of New York, and has been on a European pleasure tour with a party of friends in this, his magnificent yacht. She is a paddle-box steamer, with two funnels, and registers 1876 tons; she is capable of carrying 2500 tons. She is 260 feet on the keel, 270 feet on the spar-deck, 38 feet breadth of beam, 13 feet from floor timber to lower deck beams, 7 feet 8 inches between decks, 7 feet 6 inches between spar decks—making her whole depth 28 feet 6 inches. She has four boilers, which are 24 feet long, 10 feet diameter; the engines are upon the same principle as those used in our ordinary river steamboats.

"Handsome flights of stairs lead to the saloon, which is larger and more magnificent than the saloon of any ocean steamer afloat. Ranged round the saloon are beautifully furnished cabins, the doors and panels of solid bird's-eye maple and rosewood. Mirrors extending from the ceiling to the floor are fixed in the cabins. The walls are imitative marble and malachite, formed of a conglomerate of marble, stone and glass—a recent American invention. It is fixed on wood peculiarly seasoned, and bears an exquisite polish.

"The *North Star* cost some $500,000, and her weekly expenses are about $1700, exclusive of fuel. Everything on board is American. Surprise has been expressed at the small quantity of fuel consumed on board the *North Star* when her great speed is considered. In her passage across the Atlantic she consumed only 50 tons of coal a day, while the consumption ordinarily in such steamers is from 75 to 100 tons daily. She has been enabled to traverse the ocean with such speed at so little expense by her being driven by what is called a beam engine—an American invention, which has never before been used in a steamer to cross the Atlantic."

Columbia Yacht Club (Chicago) Annual Meeting

At the annual meeting of the Columbia Yacht Club, held December 12th, the following officers and directors were elected: Commodore, Wm. Geo. D. Orr, schooner, *Fame;* Vice Commodore, Samuel Dauchy, "R" sloop, *Katia;* Rear Commodore, E. C. Boutelle, power cruiser, *Jean Marie II;* Treasurer, Fred C. Taylor; Secretary, Fred D. Porter. Directors for two years, John P. O'Rourke, "Q" sloop, *Intruder;* Fred W. Weston, yawl, *Windward.*

Can Racing in the Open Classes Be Revived?

By HENRY L. MAXWELL

WHILE racing in the one-design classes is not doing any too well, "open" racing has practically reached the vanishing point. This situation has resulted through several causes; some beyond our control, such as high surtaxes on income; others that may be greatly mitigated by proper revision of our racing rules.

Of the latter, there are three chief offenders, as follows: (a) High cost of construction, both actual and relatively as compared to that of the one-design classes, (b) Low second-hand value, (c) Short racing career, usually not over two years.

Of these the first (a) is relatively not so important, inasmuch as the cost of everything has practically trebled in the last decade. Unfortunately this has not been the case with second-hand values. Hence the importance of (b) as the following table will show:

		Cost	Sold at	Ratio	Loss
1923	6-Meter Boat..	$7,500.00	$3,000.00	40%	60%
1900	*Sis*	$2,500.00	$1,500.00	60%	40%

Sis, built by Herreshoff in 1900, was the highest priced raceabout of that year. Moreover, she never won a class championship. Her size and finish were practically the same as that of *Clytie*, *Priscilla*, and *Viva*. Owing to my lack of price data on any "R" boats, the Six Meters are used in this comparison as they are approximately the same in size, type and initial cost.

This present ratio of loss to initial cost (60%) is entirely too great. Moreover it is the great deterrent to building in the "open" classes. While the day never will come when, other things being equal, a second-hand yacht will bring as much as a new one, there is no reason why this loss cannot be greatly reduced. The answer is to modify our measurement rule so as to produce a vessel that, as an ex-racer, will have considerable cruising value. Today they have only junk value.

This can be accomplished only by changing the present excess draft formula to an elastic, "50-50" one. By "50-50" is meant a formula that will allow a moderate draft yacht to race, on an equal speed basis, with a deep one. At present, such is not the case, our rule practically compelling the use of great draft in racing yachts.

Theoretically, all draft, being a speed producing factor, should be taxed. However, this would put a premium on capsizability. Hence, all draft, other than enough to guard against this undesirable feature, should be taxable. Moreover, to insure the proper enactment of the above principle, any draft formula should be based on sail area instead of, as at present, on load water line length. Furthermore, as draft becomes increasingly more inconvenient, any excess, irrespective of how it be determined, should be taxed on a "progressive" scale, and not by a "flat" rate, as at present.

From a careful study of such yachts as *Mischief*, *Shamrock* (built in 1887), *Puritan*, *Volunteer*, and *Lasca*, all of which, over long careers, have never capsized, as well as of the schooner *Grayling*, which did once capsize, it would seem that a draft of 10% of the square root of a yacht's sail area should render her more than safe from any danger of "turning turtle." Hence, the following formula is suggested:

$$\text{Maximum untaxed draft} = \frac{\sqrt{\text{S.A.}}}{10}$$

Any draft exceeding that, derived from above formula, is excess draft, and should be handled as follows:

Add to Rating,	75%	of	First	Foot*	of	XS. Dft..	(Tax on 1 ft.	XS. Dft.	= 0.75 ft.)
Do	150%	of	Second	do	of	do	..(Tax on 2 ft.	do	= 2.25 ft.)
Do	225%	of	Third	do	of	do	..(Tax on 3 ft.	do	= 5.50 ft.)
Do	300%	of	Fourth	do	of	do	..(Tax on 4 ft.	do	= 8.50 ft.)

* Or fraction thereof.

And so on, increasing the taxation rate of each new bracket 75% over that of the preceding one. However, for yachts launched prior to January 1, 1924, the maximum percentage should be 225. That is, in their case, *all* excess draft above 2 feet shall be multiplied by 2.25 and the product added to the penalty theretofore ascertained. Moreover, if the above method proves to be too severe, or the reverse, the "common difference" (0.75) may be changed, as desired.

This should tend to improve defect (b), as it would undoubtedly give a moderate draft yacht a much better, if not a 50-50, chance than at present.

In regard to (c), the remedy is quite simple and why it has never been tried is beyond me. It is:

Establish an "Allowance for Age," similar to the allowance for rig, for years enjoyed by yawls when racing against sloops. This would work out as follows:

A	yacht	shall	rate*	in	her	First	Season	@	100%	of	her	actual	rating					
A	do	do	do	do	do	Second	do	@	100%	do	do	do	do					
A	do	do	do	do	do	Third	do	@	97%	do	do	do	do					
A	do	do	do	do	do	Fourth	do	@	95%	do	do	do	do					
A	do	do	do	after	her	do	do	@	94%	do	do	do	do					

* For both time allowance, if any, and classification purposes.

Her "revised" rating is the one on which she is classified. For example, the new "Q" sloops *Grayling* and *Aquanno* could, in 1925, increase their respective actual ratings to 25.77 and still rate in class "Q," as 97% of 25.77 equals 24.99. *Aquanno* could effect this change by increasing her sail, while *Grayling* could take a draft penalty to advantage. On the other hand, should they not increase their actual ratings, they would not receive any time allowance when racing in Class Q, though their revised rating would be only 24.22.

In regard to *Grayling* and *Aquanno*, note that, in their third season, they would be racing, boat for boat, and with a good chance of winning, against any newcomers in the class, but, in order to win, they would have to be well sailed and kept up. In regard to their being no "allowance" in the second season, this is omitted, purposely, in order not to discourage building of new boats.

Furthermore, should this "allowance for age" be made retroactive and applied to the Six Meter class, would not *Grebe* and *Clytie* be hard to beat? Also, *Montauk* and *Cygnet* would probably get in the running again.

One thing should be particularly emphasized: This is *not* an allowance for inferiority. Rather it is an adjustment of superiority, said "superiority" of the new boat being largely due to improvements based on data supplied by her older sister. For these data she should be willing to pay and there should be

no stigma on the older boat's accepting same, providing it be equitably apportioned.

This "allowance for age" should ordinarily give a racing career of at least four years and, combined with the above proposed excess draft taxing formulas, should bring down the average yearly yachting loss (capital account only) to about half its present figure. If, and when, this is accomplished there should be no dearth of building in the "open" classes.

From the above, it would appear that the writer of this article is a centerboard crank. This is not the case. Of a score of racing yachts he has owned, one only has had a centerboard. Where conditions permit, he prefers keels. However, he realizes that the logical ultimate owner of a racer is usually a cruising man and as such will give more for a moderate draft vessel.

[Ed. Note—Henry L. Maxwell is too well known to the yachting world to need any introduction here. While some of the suggestions he makes are radical, they are from one with long experience.

List of Yachts with Dimensions Pertinent to the Question of Draft Limitation

Year Launched	Yacht	L.W.L.	S.A.	$\sqrt{S.A.}$	Draught	Rating	New* Rating	Loss in Time All'ce.	
1879	Mischief	61.00	4,000	63.20	5.33				
1883	Grayling	81.00	7,350	85.73	5.75				
1885	Puritan	81.00	7,982	89.30	8.67				
1886	Mayflower ...	85.50	8,500	92.20	9.75				
1887	Volunteer	85.80	9,271	96.40	10.00				
1887	Shamrock	69.00	5,800	76.15	8.00				
1889	Merlin	88.67	9,448	97.20	9.33				
do	Constellation .	106.00	11,696	108.15	13.33				
1892	Lasca	90.00	9,330	96.59	10.00				
1894	Emerald	85.00	8,669	93.11	10.00				
1891	Harpoon	45.83	3,200	56.57	7.50				
1900	Sis	20.92	600	24.48	3.00				
1902	Alert	28.33	1,120	33.46	4.17				
1903	Polaris	50.00	3,783	61.50	7.00				
1905	N.Y."Thirty"..	30.00	1,087	32.95	6.25	27.70	33.61	37.77	S.P.M.
1914	Comet	29.00	737	27.11	5.33	22.46	26.11	32.56	do
1917	Larchmt. "38".	38.33	1,844	42.94	7.83	36.30	43.02	29.11	do
1916	N.Y."Forty" .	40.75	2,449	49.48	8.00	42.00	47.61	20.20	do
1913	N.Y."Fifty" ..	50.00	3,193	56.51	9.75	48.40	56.38	22.87	do
1922	Ventura	45.00	1,565	39.56	4.00	39.30	39.34	None	
1906	Sonnica(C.B.).	83.00	6,500	80.62	10.00	70.20†	72.14†	3.42	do
1913	Vagrant	80.00	7,100	84.32	14.83	65.00†	72.91†	14.93	do
1923	Wildfire	68.00	5,905	76.78	12.75	61.10†	70.24†	18.54	do
1907	Irolita	62.67	5,386	73.39	12.00	57.20†	65.52†	18.71	do
1913	Flying Cloud..	61.67	5,000	70.71	11.33	55.00†	59.58†	11.48	do
1910	Queen Mab...	56.25	3,875	62.20	10.67	45.90†	50.86†	16.07	do
1911	Elena	96.00	12,403	111.37	16.92	88.00†	98.58†	12.73	do
do	Enchantress ..	100.00	11,935	100.96	15.00	86.70†	95.52†	10.97	do

* NEW RATING = Old rating plus draft penalty, which is figured as follows: All draft over 10% of square root of sail area is Excess Draft, the first foot of which is penalized @ 75%, the second foot @ 150%, and the remainder @ 225%. (See above.)

† = Figured on 90% of actual rating (schooner allowance for rig).

In the last two groups the only yacht, *Sonnica*, that is materially benefited by the "New Rating" is a centerboarder. The rest are keels. Also, *Sonnica* and *Vagrant* would rate practically the same.

The Month in Yachting

The Need of a Governing Body for Yachting

THE need of some central governing body in yachting affairs to standardize rules and to adopt such changes in rating measurement and sailing rules as may be necessary from time to time was never more apparent than at present. As things are now, yachting in this country is controlled by various local governing organizations who are not bound to work in conjunction with other governing bodies, and the only way anything is accomplished is through the cumbersome method of conferences.

A year or so ago a movement was inaugurated looking towards the formation of a central governing body to which all of these local racing associations would send delegates. Frank Bowne Jones did considerable work on it at the time, but apparently nothing has ever come of it. We are now faced with some suggested changes in our Universal Rule of Measurement and committees of the N. Y. Y. C. and the L. I. Association are working on these, but anything they might recommend would only be binding on their own organizations and might not meet with the approval of the local organizations in different parts of the country.

Another matter in which such a national organization could function at this time would be in the choice of a skipper and crew to represent the United States in the Olympic Games Regatta, to be sailed this summer in France in connection with the Olympic games. Most of the other yachting countries will send representatives to this regatta, but so far we have heard no talk of the United States sending a crew.

Katia, a new Class R boat, owned by Samuel Dauchy of Chicago, which made her appearance on Lake Michigan late last Summer. She was designed by J. G. Alden.

There will be races at this regatta for both eight-meter and six-meter boats, and for a small one design class, the latter to be sailed single handed. Boats in this latter class are centerboarders about 16½ ft. in length and 6 ft. 6 in. beam. Now, if we send crews over to represent this country, how are they to be selected in the absence of any governing body, and who is to have the say as to who shall go and who shall not? Certainly the A. A. U. does not know anything about who are our representative sailors, and it hardly seems possible for them or any local organization to hold elimination races for the selection of such a team.

If some individual is sent to sail in the smaller classes, especially in the one-design, we believe that "Bill" Inslee, champion of the Star Class, would be a logical choice. He has a record that is based on *actual results* and not a matter of guess work as, in one of the largest classes ever sailed, he has repeatedly defeated all comers and has twice won the National Championship in this class. Inslee is not racing in the Star Class this year,

The racing days will soon be here again. Carroll Alker at the wheel of one of the N. Y. Y. C. 50-footers. The other members of the after guard are Bob Seeley, Ted Alker and J. Raynor.

and if a man has to go abroad without the formality of elimination races, we respectfully suggest Inslee to whatever committee has the choice. As a small boat skipper there is none better.

However, the choosing of someone to represent the United States is a matter for a central governing organization and emphasizes the need of such a body in this country.

New Boats for the Six-Meter Class

In anticipation of the British challenge for a Six-Meter team race this year, six new six-meters are being built in this country, which, with the boats already in existence, will make one of the largest classes on the eastern seaboard. Fred Hoyt is designing three of these boats, one for Boardman & Irvin, who formerly owned the *Grebe;* one for Harry Maxwell and another for Henry B. Plant. H. J. Gielow's office has a new boat for Commodore Howard C. Smith and a syndicate of Seawanhaka yachtsmen, while W. A. W. Stewart is having a new boat designed and built by Herreshoff. Clinton Crane, formerly owner of the *Peggy,* is designing a new boat for himself.

So it looks as if we are going to have some real racing in the Six-Meter Class this Summer, as we did in 1922.

An Attractive Club Publication

There is nothing that does as much for a boating organization as a club journal, or log, which keeps the members in touch with the various activities of the club better than can be done in any other way. Some years ago the Chicago Yacht Club started a club journal called the Lake Michigan News. The magazine was ably edited by J. M. Handley, one of the active sailing members of the club, and the December issue, which is a special review number, has just been received. We confess to having read it with a lot of interest. It is well printed, profusely illustrated, and has just the right local touch to make it popular with the club members. It also contains a review of the entire racing season on Lake Michigan.

Such a work is always a labor of love for those who are back of it, and whose work makes it possible, and it is often labor that is not appreciated by the members themselves. We congratulate Handley, Gordon Seagrove, Donald Prather and the others who made this magazine such a success.

Com. W. L. Baum, the new head of the Chicago Y. C. The Commodore sailed the *Amorita* in the Bermuda Race of 1909. It is hoped he may get another yacht in the East and enter her under the Chicago burgee in this year's race.

New Flag Officers for Eastern Yacht Club

At the annual meeting of the Eastern Yacht Club, of Marblehead, in December, the following officers were elected for the coming year: Commodore, Nathaniel F. Ayer, schooner *Queen Mab;* Vice-Commodore, J. S. Lawrence, sloop *Squaw;* Rear Commodore, Henry A. Morss.

Commodore Herbert M. Sears retires after serving the club as flag officer for many years.

Plans are under way looking towards the building of a new club house on Eastern Point, looking down Marblehead Harbor.

Gulfweed

A Little Cruiser Designed Especially for the Amateur Builder

By JOHN G. HANNA

PART III

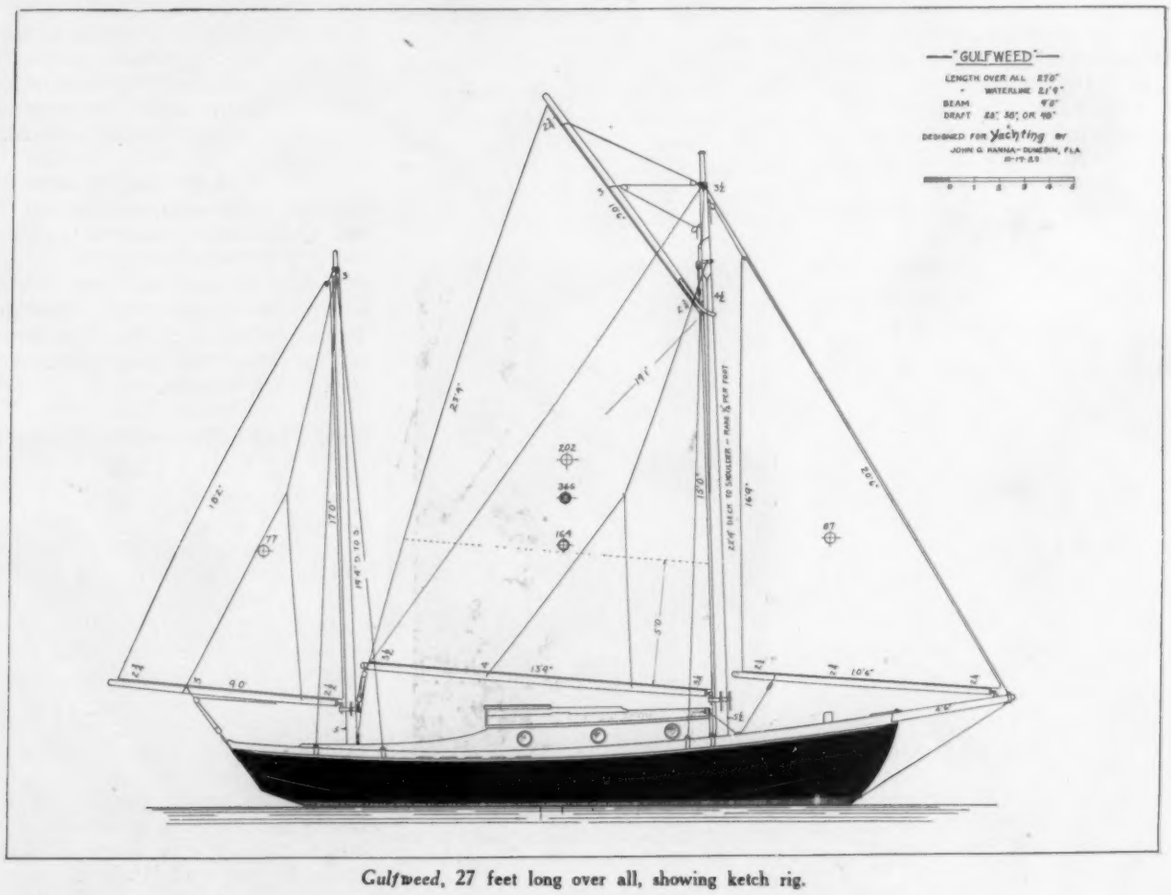
THE ketch rig illustrated this month has the least canvas of any of the three plans, as is to be expected. The ketch is not adapted to large area. Its merit is in easy handling, good balance, and little reefing. I have been asked why I could not get more area by carrying this rig higher. It is easy enough to do that on paper. It has been done, in some rather comic ketch rigs for small boats recently published. But to design a good rig requires something more than the ability to draw pictures and measure the number of square feet. One must know the peculiarities of each rig. There is a decided limit to the height to which a gaff-headed sail may be carried efficiently on any given boom length. When they get too high the gaff swings off so far that the driving power of the sail is badly affected.

This is often noticeable on a schooner's foresail. In that case, it is, first, a necessary evil, and second, of no vital importance, since the schooner's mainsail is her principal driver. A ketch with her mainsail shaped like a schooner's foresail is hopeless. She loses more driving power than the few extra feet of canvas may gain, when her gaff swings off. And if the main isn't pulling well, a ketch gets nowhere in anything but a gale. The only way to make a tall, narrow gaff sail pull well is to peak the gaff close up to a high mast, and if you are going to that extreme, you might as well, or better, put on a Marconi rig and be done with gaffs.

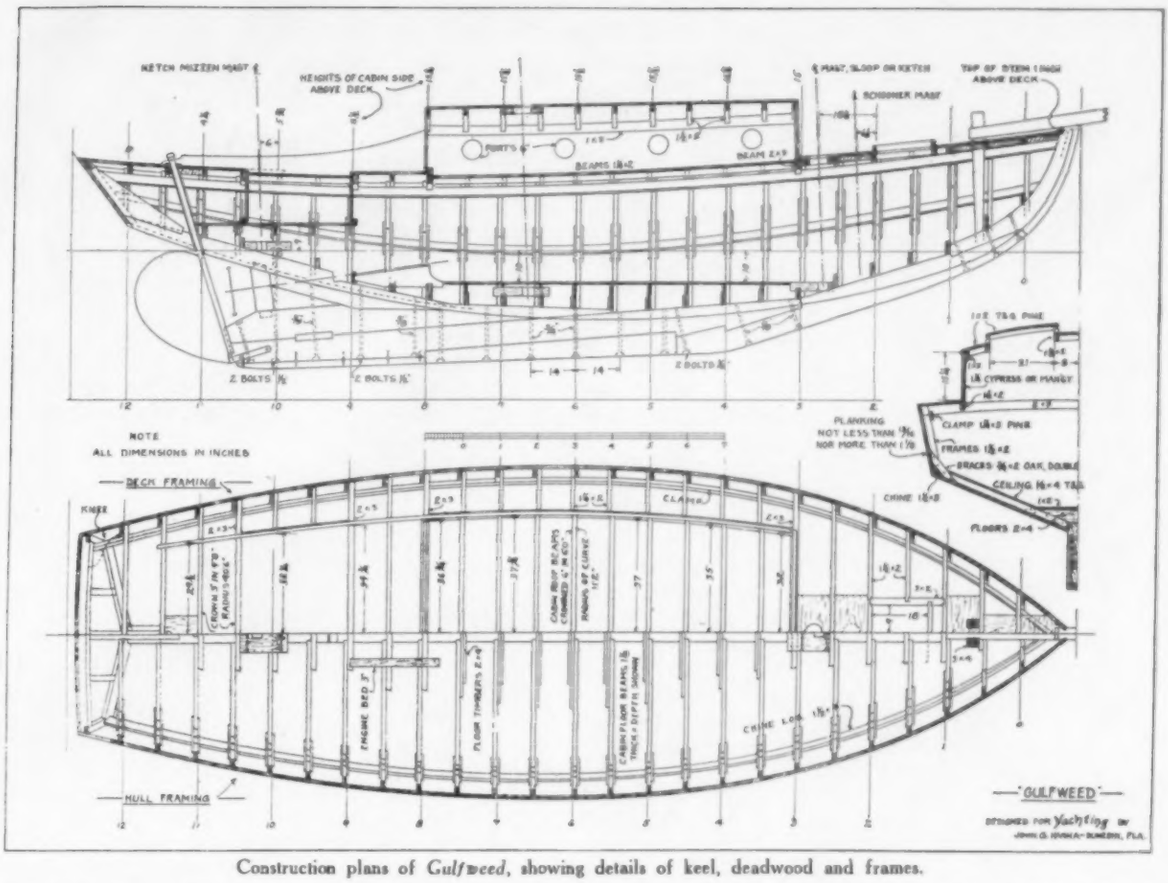
That is why the ketch rig of *Gulfweed* shows only 366 square feet. This is the amount of canvas carried by Day's *Sea Bird* on her famous Atlantic passage, when she beat the time of many larger boats. Nevertheless, it must be plainly understood that it is a very moderate rig, and *Gulfweed* is a bit larger and heavier than *Sea Bird*. It would be a mistake to choose the ketch plan if you must do all your sailing inshore and in localities where only light breezes are generally found in the yachting season. But it's the grand rig for sea-going, or any place you have enough wind for it.

The greatest objection to the ketch for small boats is that the mizzen usually comes in the middle of the cockpit, where it is a nuisance. I have avoided this by setting the mast well aft and bringing the stern deck forward to meet it. Thus the cockpit is clear, as in a yawl, yet there is plenty of deck room to furl the mizzen without the need of climbing out on a boomkin, as in a yawl. It is advisable, if not necessary, to use a wheel steering gear. I have led the mainsheet to the mizzen mast, to keep it well clear of the steering wheel. This will be perfectly safe if specifications are followed, for a simple engineering calculation shows the mizzen mast of size given is capable of standing over ten times the greatest strain that can be put upon it. There is room to bring the sheet to deck if you like, however.

Now let's get back to the discussion of the building job, where we



Gulfweed, 27 feet long over all, showing ketch rig.



Construction plans of *Gulfweed*, showing details of keel, deadwood and frames.

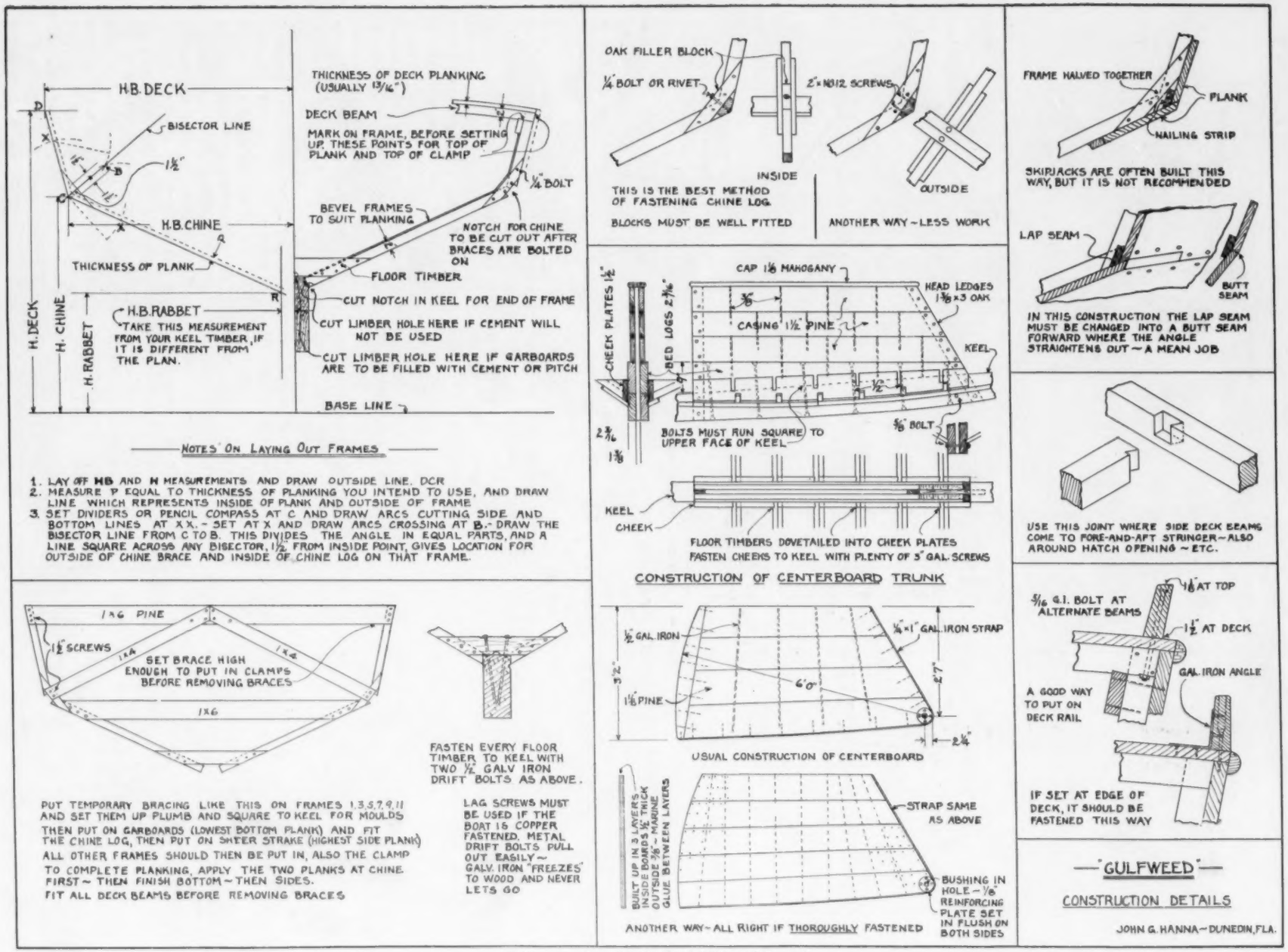
left off in December. I suggest great care in fitting the various parts of the keel together. Don't be afraid of the job of making a hook scarf. It is very easy if you lay out accurately and run your saw just inside of, not on top of, the pencil marks. And there is nothing just as good in boat building. Bolts hold very well against a strain tending to tear timbers apart, but they cannot altogether check a tendency to "work" in a heavy sea, which in time may loosen the bolts. A snugly fitted scarf, when it gets wet, locks the timbers as tightly as one piece. The key block, placed between two timbers that lay flat on each other, serves the same purpose. Above all, do not fail to put in the stern post with a good mortise and tenon joint. Run the bolts about as shown on the construction plan, remembering that it is always best, when other factors allow, to have them cross the seam squarely, even if necessary to cut a step in upper or lower faces to let the heads seat.

Bolts with riveted heads are generally used for putting together keel members, but it is better and surer for the amateur to thread both ends of suitable lengths of galvanized rod and put nuts on each end. Screw up until the washers begin to bite the wood, and then turn down the edges of the bolt with a ball pein hammer just enough to make sure the nuts can never back off. Fill the bolt holes, inside and out. My personal preference is Portland cement for this job. It never comes out, as putty and wood plugs usually do. Remember cement must be wetted for several days after it sets. If allowed to dry too rapidly it crumbles.

I have been asked why I specified lead instead of iron ballast, "when iron is so much cheaper." Is it? At this writing lead is quoted at 8 cents a pound and iron about $24 a ton. That looks as if lead costs nearly seven times as much as iron. But that is not the whole story. These are wholesale prices in carloads. You can buy scrap lead from the local junk dealer at 8 or 9 cents, melt it in an iron pot, and cast it in a home-made mould from a home-made pattern. Your cash outlay need not exceed nine cents a pound. But iron will require a professionally made pattern with core prints for the bolt holes, and your foundry, after getting the iron at the price named, will have to melt it, with plenty of coal, in an expensive furnace, and cast it in a mould made by expensive labor, all in a shop whose overhead charges must be met, and a profit added. So that, all told, you will be lucky if the final cost of an iron keel casting is not over 10 or 12 cents a pound.

The story does not end there, either. Lead is imperishable and always worth pretty much what it cost, with a present probability that the price will go higher. Lead ballast is a recognized element of value in selling a second-hand boat. But a rusty old hunk of iron is practically worthless, and, worse, the rust eats into the keel timber and weakens it in time. However, if you want to use iron, make the casting 2 inches deeper, to partly allow for lighter weight of iron. If you want lead but feel you cannot possibly afford 1,100 pounds, it is permissible to put 900 or even 700 pounds on the keel and make up the difference by cheap iron or even stone ballast inside—of course at the sacrifice of some sail carrying power.

A pattern for the lead can be made of any wood. Make it ⅛ inch per foot larger to allow for shrinkage, and taper it a little from top to bottom so it can be pulled out of the mould. Bury it flush with the surface of the ground in any bit of sandy earth, just damp enough to pack well. Get the top of the pattern absolutely level, and tamp the sand hard all around it.


H.B. DECK
BISECTOR LINE
1½"
H.B. CHINE
THICKNESS OF PLANK
H.B. RABBET
"TAKE THIS MEASUREMENT FROM YOUR KEEL TIMBER, IF IT IS DIFFERENT FROM THE PLAN.
H. DECK
H. CHINE
H. RABBET
THICKNESS OF DECK PLANKING (USUALLY 13/16")
DECK BEAM
MARK ON FRAME, BEFORE SETTING UP, THESE POINTS FOR TOP OF PLANK AND TOP OF CLAMP
¼" BOLT
BEVEL FRAMES TO SUIT PLANKING
NOTCH FOR CHINE TO BE CUT OUT AFTER BRACES ARE BOLTED ON
FLOOR TIMBER
CUT NOTCH IN KEEL FOR END OF FRAME
CUT LIMBER HOLE HERE IF CEMENT WILL NOT BE USED
CUT LIMBER HOLE HERE IF GARBOARDS ARE TO BE FILLED WITH CEMENT OR PITCH
BASE LINE
NOTES ON LAYING OUT FRAMES
1. LAY OFF HB AND H MEASUREMENTS AND DRAW OUTSIDE LINE. DCR
2. MEASURE P EQUAL TO THICKNESS OF PLANKING YOU INTEND TO USE, AND DRAW LINE WHICH REPRESENTS INSIDE OF PLANK AND OUTSIDE OF FRAME
3. SET DIVIDERS OR PENCIL COMPASS AT C AND DRAW ARCS CUTTING SIDE AND BOTTOM LINES AT XX. - SET AT X AND DRAW ARCS CROSSING AT B. - DRAW THE BISECTOR LINE FROM C TO B. THIS DIVIDES THE ANGLE IN EQUAL PARTS, AND A LINE SQUARE ACROSS ANY BISECTOR, 1½" FROM INSIDE POINT, GIVES LOCATION FOR OUTSIDE OF CHINE BRACE AND INSIDE OF CHINE LOG ON THAT FRAME.
1X6 PINE
1½" SCREWS
1X4
SET BRACE HIGH ENOUGH TO PUT IN CLAMPS BEFORE REMOVING BRACES
1X6
PUT TEMPORARY BRACING LIKE THIS ON FRAMES 1.3.5.7.9.11 AND SET THEM UP PLUMB AND SQUARE TO KEEL FOR MOULDS
THEN PUT ON GARBOARDS (LOWEST BOTTOM PLANK) AND FIT THE CHINE LOG, THEN PUT ON SHEER STRAKE (HIGHEST SIDE PLANK)
ALL OTHER FRAMES SHOULD THEN BE PUT IN, ALSO THE CLAMP
TO COMPLETE PLANKING, APPLY THE TWO PLANKS AT CHINE FIRST - THEN FINISH BOTTOM - THEN SIDES.
FIT ALL DECK BEAMS BEFORE REMOVING BRACES
FASTEN EVERY FLOOR TIMBER TO KEEL WITH TWO ½" GALV IRON DRIFT BOLTS AS ABOVE.
LAG SCREWS MUST BE USED IF THE BOAT IS COPPER FASTENED. METAL DRIFT BOLTS PULL OUT EASILY - GALV. IRON "FREEZES" TO WOOD AND NEVER LETS GO
OAK FILLER BLOCK
¼" BOLT OR RIVET
INSIDE
2" NO12 SCREWS
OUTSIDE
THIS IS THE BEST METHOD OF FASTENING CHINE LOG
BLOCKS MUST BE WELL FITTED
ANOTHER WAY - LESS WORK
CAP 1⅛ MAHOGANY
HEAD LEDGES 1⅜ x 3 OAK
CHEEK PLATES 1½"
BED LOGS 2⅞"
⅜"
CASING 1½" PINE
KEEL
½"
⅝" BOLT
2¾"
1⅜"
BOLTS MUST RUN SQUARE TO UPPER FACE OF KEEL
KEEL
CHEEK
FLOOR TIMBERS DOVETAILED INTO CHEEK PLATES
FASTEN CHEEKS TO KEEL WITH PLENTY OF 3" GAL. SCREWS
CONSTRUCTION OF CENTERBOARD TRUNK
½" GAL. IRON
¼" x 1" GAL. IRON STRAP
3'2"
1⅛" PINE
6'0"
2'7"
2¼"
USUAL CONSTRUCTION OF CENTERBOARD
BUILT UP IN 3 LAYERS. INSIDE BOARDS ½" THICK OUTSIDE 3/16" - MARINE GLUE BETWEEN LAYERS
STRAP SAME AS ABOVE
BUSHING IN HOLE - ⅛" REINFORCING PLATE SET IN FLUSH ON BOTH SIDES
ANOTHER WAY - ALL RIGHT IF THOROUGHLY FASTENED
FRAME HALVED TOGETHER
PLANK
NAILING STRIP
SKIPJACKS ARE OFTEN BUILT THIS WAY, BUT IT IS NOT RECOMMENDED
LAP SEAM
BUTT SEAM
IN THIS CONSTRUCTION THE LAP SEAM MUST BE CHANGED INTO A BUTT SEAM FORWARD WHERE THE ANGLE STRAIGHTENS OUT - A MEAN JOB
USE THIS JOINT WHERE SIDE DECK BEAMS COME TO FORE-AND-AFT STRINGER - ALSO AROUND HATCH OPENING - ETC.
5/16 G.I. BOLT AT ALTERNATE BEAMS
1⅛" AT TOP
1½" AT DECK
GAL. IRON ANGLE
A GOOD WAY TO PUT ON DECK RAIL
IF SET AT EDGE OF DECK, IT SHOULD BE FASTENED THIS WAY
"GULFWEED"
CONSTRUCTION DETAILS
JOHN G. HANNA - DUNEDIN, FLA.

Full construction details for building *Gulfweed*.

Then when the pattern is carefully lifted out you have a perfect mould of it in the sand. Set the pot up near by. 1,100 pounds of lead makes about 12 gallons melted, so you need a 15-gallon pot at least. Better melt more than you need rather than not enough. Don't try to pour it by tipping the pot, or someone will decidedly get hurt. Two men can get the metal to the mould fast enough by transferring it with large dippers. If you can't get a large iron pot it is all right to make the casting in several heats. Just before pouring the second, sprinkle the surface of the lead already in the mould with powdered rosin, which carries off surface impurities and permits the second part to melt onto the first.

Bolt holes can be bored in the lead with an ordinary brace and square shank drill bit. Drill a small pilot hole first, and keep the drill wet with turpentine or kerosene to prevent the soft metal from gumming up the point. Be sure your drill is a trifle oversize if necessary, for galvanized iron bolts are usually oversize.

In case you are building the centerboard model, the drawings herewith give full details of how to go about it. Make liberal use of gaskets soaked in white lead paint. These may be canvas, but I think heavy cotton flannel better. It is important to have the head ledges a tight fit in the slot, and square to the keel, so the trunk will stand vertical. Put a gasket at the ends of the slot, wedge the ledges against this gasket very tightly, and bore bolt holes through keel and ledges as shown. Another gasket goes on top of keel and under bed logs These must be very thoroughly bolted down with screw bolts, not only to prevent leaks, but because they have to stand considerable twisting strain. There may be gaskets between the succeeding planks above bed logs, or they may be made watertight with a feather strip of white pine set in grooves planed in the plank edges.

The cheek plate on each side of the keel is important. It should be oak if possible, and very thoroughly fastened with plenty of long galvanized screws. Plain notches are cut for the heels of frames, and dovetail notches for floor timbers. It will be seen that when a frame is set into its notch, and a floor timber with dovetail end slipped down its notch and bolted to frame, the combination cannot move up, down, or out. Frames in the way of a centerboard trunk are sometimes secured to bed logs by galvanized angle irons. Fair enough. Still, the method here shown is more rigid, if all notches are tight fits. Too much care cannot be given to fastening frames around the trunk of any centerboard craft, as most of the ballast is carried here and there are several kinds of strain to be met.

I advise that the centerboard pivot bolt be placed outside. If placed inside, and low, there is scarcely room, down in the V-bottom, to remove the bolt for renewal. If placed higher, that means that a less amount of the important cutting edge of the board can be dropped below the keel. As the bolt is never removed except when the boat is hauled out for painting, there is no objection to having the bolt outside. It is assumed that you will pin the nut on the bolt with a piece of heavy wire, not a common little cotter pin.

Now we come to two of the most debated points in V-bottom construction. One is the bracing of the bottom and side frames. In large craft this is always done by natural crook knees, bolted on top of or alongside of frames. It amuses me to see the many little V-bottom designs published for amateur builders, on which the designers, who apparently never built a boat in their lives and know nothing of lumber supply, calmly specify knees for chine bracing. Knees small enough for this job are not a market commodity. They are unobtainable except by builders able to select their own timber supply at the forest. A curved piece of wood cut out of a straight-grain plank is not a knee, nor anything else but a delusion. If it does not split before the boat is launched, it probably will soon after. For all practical purposes amateurs are limited to straight pieces of wood for chine bracing, and these make just as strong a job as knees, at far less labor and expense.

Usually one brace is put on, bolted to the sides of the frames. But if building such a boat for myself, I most certainly would use two lighter pieces, one on each side of the frame. These need be only half the thickness of a single brace, so no greater weight of material is required, and the little extra labor is well worth-while in view of the far greater rigidity and permanence of bracing. For with one brace, twisting and bending stresses are set up, tending to work bolts loose; while with two, the forces are balanced, and all parts are free to exert their full strength in direct resistance to the load. One may ignore such facts in a small motor boat, but a sailing craft, with the keel ballast pulling one way and the sails another, is a far different proposition, subject to many times worse strain, and cannot be too well built. I advise galvanized iron bolts for fastening braces and floor timbers to frames. These are very expensive if bought by the dozen at the village store, but cheap if bought by the hundred from marine hardware dealers advertising in YACHTING.

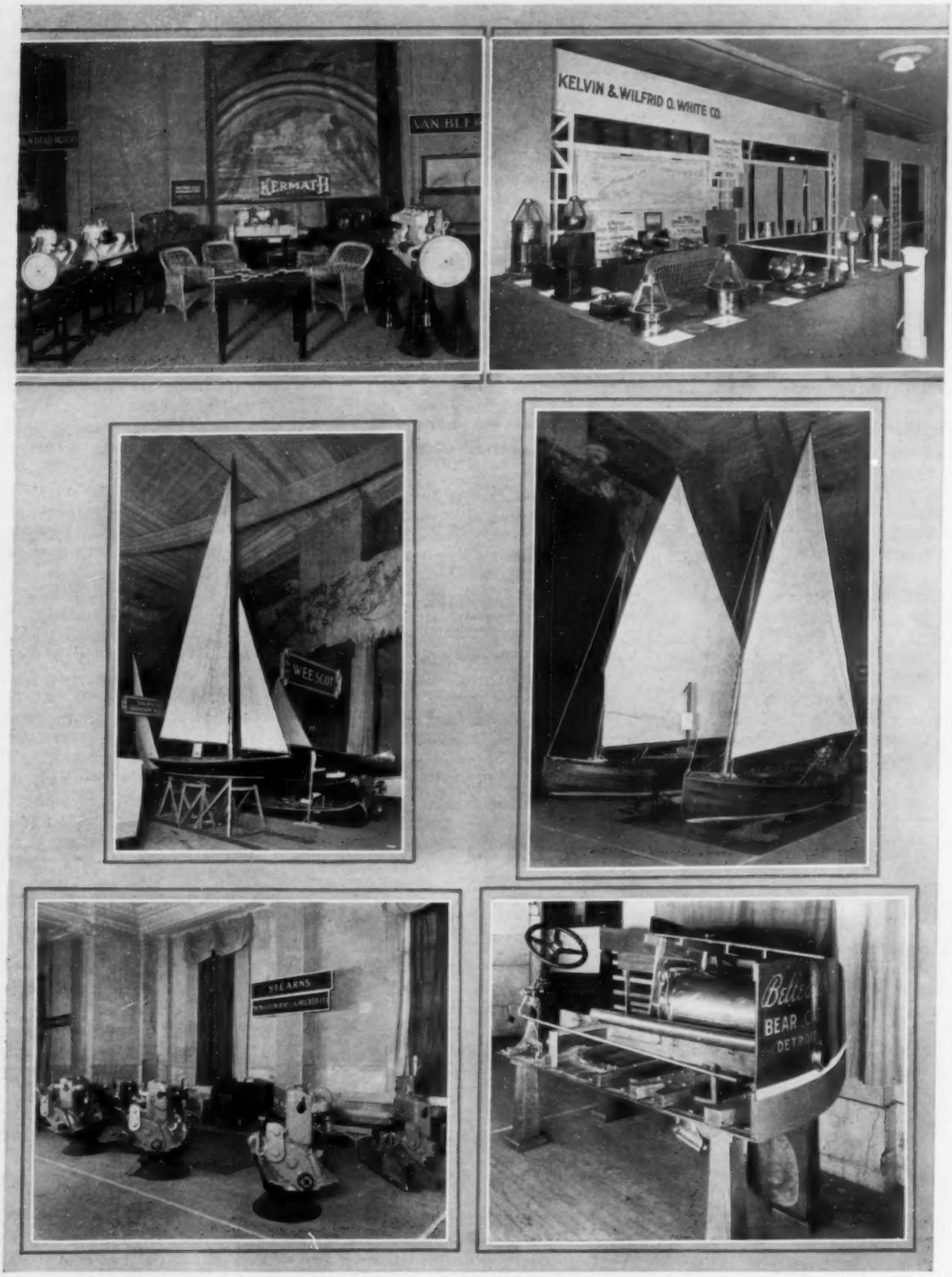
The other debatable point is the chine seam. Some kind of backing is necessary for this seam, as it is more likely to open than any other. There are many ways to make this backing. On Chesapeake Bay a timber heavy enough to deserve the name "chine log" was sometimes used, and the name persists. A piece at least thick enough to cut a solid rabbet for the planks is sometimes advised, or a two-piece job giving the same shape as a rabbet. But as there is quite a bit of bend and twist required, I think the amateur builder had better use the lightest piece consistent with a good job. Bending may be made still easier by tapering the thickness from 1½ inches at station 3 to 1⅛ inches at the stem, cutting the forward notches correspondingly shallower. After getting the piece approximately bevelled, it is a good idea to soak it in water for a few days and then put it under a sharp bend between three stakes driven in the ground, or three cleats nailed to the floor, if you have room, and leave it till dry. This will give it a permanent set, which makes the final fitting much easier.

It is most desirable to have chine and clamp in one length, and is worth some trouble in getting long timber. But if two pieces are necessary, make the forward piece as long as possible, to bring the joint well aft of amidships, say about station 8, and bolt the pieces to an oak butt block between frames.

The swelling of planks at the chine will tend to force them off if they fit tightly, so leave the chine seam open about 1/32 inch inside and 3/32 outside, and caulk lightly. All other seams must be tight inside and open about 3/32 outside. Of course the sharp edge of the chine must be rounded off in the final finishing, but don't plane down

(*Continued on page* 127)

Some of the Attractive Exhibits at the Recent Motor Boat Show Held in New York



Top—Exhibit of Kermath engine models, in all the colors of the rainbow.

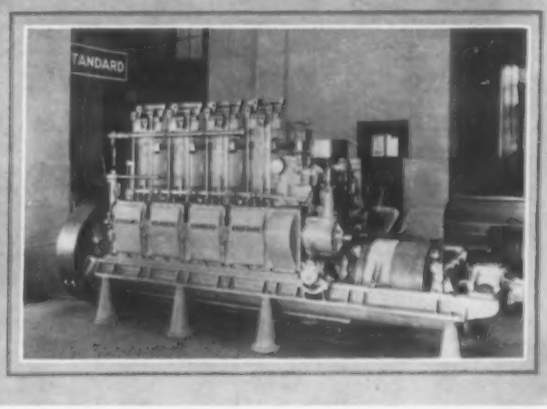
Center—The *Wee Scot*, a little 15-foot keel knockabout, exhibited by Thos. D. Scott.

Bottom—The full line of Stearns Marine Motors, including some new models, attracted a lot of attention at the Show.

The Kelvin and Wilfred O. White Co. exhibited a fine line of navigating appliances, which would enable a skipper to take his boat anywhere.

Two of the Snowden 14-foot sailing tenders, one finished in oak and one in mahogany, exhibited by Vargo Trading Corp.

Sectional model of Belle Isle Bearcat, showing sturdy construction details.



Top—The 28-foot fast runabout and the new 34-foot fishing cruiser exhibited by the Greenport Basin and Construction Co.

Center—One of the hits of the Show was the little 16-foot Red Wing, designed and built by the Luders Marine Construction Co.

Bottom—A miniature electric drive motor hooked up to two gasolene engines, exhibited by the Westinghouse Electric and Manfg. Co. The propeller turned in a tank of water. This is a model of the Diesel outfit going into many large yachts.

A general view of an aisle of the Palace, showing in foreground three Great Lakes Boat Bldg. Corp. boats, and in the background the Consolidated Shipbuilding Corp.'s playboat and yacht tender.

The 26-foot Casey auxiliary cruiser attracted thousands of sailormen. In the background is a Star, exhibited by the New England Boat Works.

The new Standard heavy oil, full Diesel engine, exhibited at the Show for the first time, was a fine piece of engineering work.

Helvetia IV knocking off 23 miles. She is a new Runabout Tender owned by C. O'D. Iselin and built from designs by Tams & King.

Helvetia IV, a Fast Runabout Tender

In turning out *Helvetia IV* for Mr. C. O'D. Iselin of New York. Messrs. Tams and King have produced a fast and somewhat novel type of runabout tender that should prove extremely interesting to those who want an able little boat for knocking around, with good speed and moderate power. This little boat was built last summer by Julius Peterson at Nyack, N. Y. She is 30 feet 6 inches length over all, with a beam of 8 feet and a draft of 2 feet 5 inches. She has proved extremely weatherly, is of moderately heavy construction, is comfortable and easily handled. The engine, which is a Stearns model MER, is installed amidships under a permanent cabin house. With her power plant turning at a speed of 1,475 r.p.m. and developing approximately 110 h.p. she makes 23 miles per hour, which is excellent for the size of the boat and the comparatively moderate horsepower. This speed, also, is attained without the excessive cost of fuel and upkeep that is coincident with larger power plant operation when speeds up to thirty miles or more are desired.

And Still New Star Fleets Are Forming

The Secretary of the Star Class, G. W. Elder, Jr., apologizes for the scantiness of the news this month. A year or so ago it would have seemed big; now a new fleet or so per month is commonplace and nothing short of a fleet at the North Pole or George Corry winning a race could put a kick into the news.

It looks as if the Chesapeake will be filled with Stars this Summer. There will be two fleets there, one at each end of the Bay. Members of the Gibson Island Y. C. at Baltimore have already twelve boats under construction at the N. E. Boat Works, Mianus, Conn. The second fleeet will be at Norfolk, Va., where it is planned to build half a dozen or more Stars. Probably there never will be more than two fleets on Chesapeake Bay, as these fleets are not restricted to any one club. In fact, they are working to promote inter-club racing, as are all fleets of the Star Class. Anyone on the Bay who is interested, no matter to what club he belongs, should write to either H. S. Hud-

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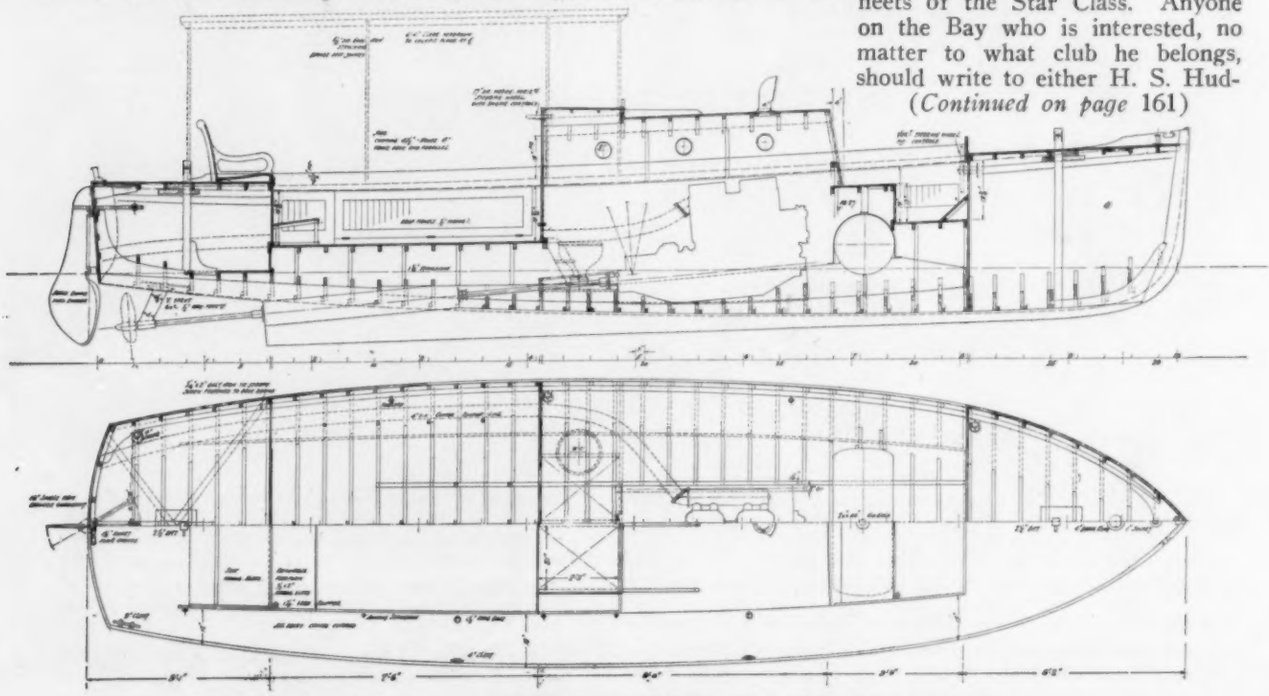


Inboard profile and accommodation plan of *Helvetia IV*, a 30-foot Runabout Tender.

Yacht or Fisherman Type?

Fisherman-Type Yacht. What Does It Mean? Would Not Seagoing Yacht Be a Better and More Easily Understood Designation?

By WILLIAM H. HAND, Jr.

I BELIEVE that the term fisherman type has been so misused by many writers that a great majority of those who read have various incorrect ideas of the real meaning of the words. This opinion I have formed after reading numerous articles in trade publications, newspapers and hundreds of letters on the subject from clients and others interested in yachting in various sections of this country and elsewhere. Whenever I have been present at discussions of this subject the same vague and hazy conception of the real meaning of the designation "fisherman-type yacht" has been apparent and with the idea of assisting in classifying this justly popular type of sea-going vessel, I offer a list of what I consider the important distinguishing characteristics:

First. SIZE. Large enough to be a practical sea-going vessel with adequate living accommodations for crew as well as owner and guests, and also with sufficient hold or storage space for provisions, "spares," and other vital essentials — unfortunately something frequently overlooked in arranging interiors.

Second. LINES. A sharp, deep, clean lined keel vessel with generous displacement, moderate freeboard, considerable deadrise in all sections, comparatively hard bilges, good beam and a form insuring ample stability without outside ballast. The overhangs may be long or short, but always fine and clean, a detail necessary to easy action at sea and for a livable ship in a bad time. With more than a small percentage of outside ballast added we have a yacht, not a real fisherman-type vessel. It is generally believed that all ballast should be inside for the best average results, including "livability" at sea, which outside ballast most unfavorably affects. The rails should be high enough to give protection at sea, but the freeboard to deck amidships should be lower than usually found in a yacht of similar length. The sheer should raise the ends well and be a sweet, sightly line.

Third. CONSTRUCTION. This must be strong, serviceable and simple. Costly details, which are essential in light yacht construction only, should be eliminated. Bent frames are considered possible only in small boats (less than 55 feet O.A. length), and the standard ship type square double moulded frames extending across keel and under keelson, with real construction ceiling, are preferable.

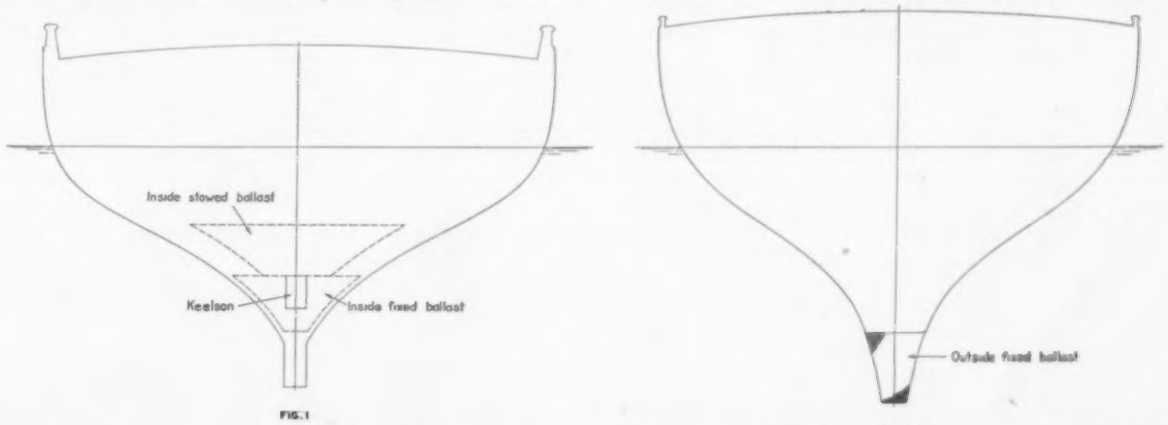
Fourth. RIG. This is usually of schooner type and may include topmasts or not, bowsprit or not, as preferred. A ketch rig is also possible, although not favored by the more experienced sea-going men in this country. All details must be strong, practical, and arranged so as to be properly and easily handled at sea. The sail area should be in proportion to the power of the vessel, but is a detail which may be varied to suit individual requirements.

Fifth. AUXILIARY POWER. Whether or not the vessel is equipped with auxiliary power is not essential to classification. If power is installed it may be whatever the owner prefers. Oil engines are favored for the larger vessels and gasolene motors for the smaller ones.

Sixth. FINISH. This may be whatever the owner wants, and has no real bearing upon classification. To many the absence of varnished mahogany and polished brass on a schooner seems to justify calling her a fisherman type, although in every other way she may be a yacht. This mistake is most common and I consider unfair. Certainly finish alone is of minor importance and not a distinguishing characteristic. A fisherman-type yacht usually has but little, if any, mahogany and brass on deck, and although neat, clean, and business-like in appearance she may be kept in proper condition with a much smaller crew than a vessel with the usual yacht exterior.

The average modern keel yacht type, whether a racer or cruiser, has, I believe, the following points of difference when compared with the fisherman type:

First. LINES. While similar to a fisherman the yacht is more cut away at both ends and in lateral plane, has greater draft, less beam, less displacement, less initial or form stability, easier turn of bilge, fuller ends, more freeboard amidships, less sheer and has a large percentage of ballast outside to insure stability and sail carrying power. The rails are usually low. Such vessels are faster under almost any conditions and give almost, if not quite, as good accommodations below decks, but they are not as comfortable, safe, or liv-



Comparative Mid-Sections—Fig. 1, Characteristic mid-section of a fisherman type yacht, indicating ballast placing. Fig. 2, Characteristic section of a modern fast cruising schooner yacht. Both sections are from well known yachts and were selected for illustration as they clearly indicate essential differences.

able at sea. All motions are quicker and, when in a rough water calm, the jerky, rapid rolling is most trying to spars, rigging, and all construction details, to say nothing of those on board. This may be attributed to deep ballast concentrated in a very small area, attached to a vessel of light displacement and a form which requires this resulting righting leverage for its sail carrying power and speed.

Second. CONSTRUCTION. This is usually much lighter in all details of hull and rigging, and is so arranged as to carry a heavy lead keel bolted on.

Third. RIG. Usually of much greater area in proportion to the length of vessel, as, in the great majority of cases, it is intended for use only in the summer months along shore and when a comparatively large crew is available to handle it. Light sails of all kinds and for all wind and weather conditions are usual items of sail equipment.

With the idea of assisting anyone contemplating buying or building to select the type best suited to his purposes, the following table is offered. It is really a condensed comparison of the two types under discussion. I have tried to be impartial, and merely to state the facts just as I now see them after many years' experience with both types:

Yacht Type	Judging Points	Fisherman Type
1	Accommodations	1
1	Speed under sail.....	0
0	Comfort at sea.....	1
0	Safety at sea.....	1
1	Appearance	1
0	Production cost (less)..	1
0	Maintenance cost (less)	1
0	Durability	1
3	Total	7

This table places the value of the listed eight points equal and the unit value as one. Others will undoubtedly place different valuations on each point and, of course, substitutions are then in order. The accommodation point appears equal; therefore, is scored on both sides. Appearance is a matter of individual opinion, and is also scored on both sides. All other points are unquestionably in favor of the type under which scored alone, and I believe are worthy of some consideration. The most successful yacht is one which by carefully planned compromises best averages the owner's requirements.

[Mr. Hand, by reason of what he has done to develop the real fisherman type of auxiliary yacht, and because of the many boats of this type he has designed and built, is exceptionally well qualified to write on this subject.—Ed.]

Help to Wipe Out This Tax

What an Unjust and Harmful Tax Is Doing to Injure the Sport and Hurt Boat Building. It Affects Every Yachtsman

WITH the starting of what appears to be a big swing back towards the water for recreation purposes, that bids fair to carry the popularity of the sport far beyond what it has ever known heretofore except for one thing—lack of suitable boats at a cost the average man can afford to pay—it would be well if everyone understood thoroughly the principal reason for this shortage in boats and for the steady decline in building at American yacht yards. Everyone who owns a boat knows the reason, but it is those who buy a new boat, or who have one built, that are most familiar with what our government does to place an intolerable burden on those who desire to use the water for pleasure, and to kill what has been and should be a useful and important industry.

The present revenue law places double taxation on the man who builds a boat. It not only makes him pay 10 per cent. of the total cost of any new boat he may buy or have built; but after he has paid what he believes to be an excessive tax, he is immediately taxed again for the use of his purchase every year thereafter. The effect of these two taxes is obvious. It has effectively killed the building of new pleasure boats in this country in anything but the smaller sizes, has forced up the price of old boats to a figure way above their intrinsic value and it is creating a situation which in a few years will result in a shortage of boats that will seriously hurt the sport. For with the old boats becoming unseaworthy and unsalable at a faster rate than new boats are at present being built, the ultimate result is apparent.

With the higher building costs, which are up to some 100 per cent. above pre-war prices, the imposition of a 10 per cent. building or manufacturing tax in addition is too much. People simply cannot or will not build. To add to the injustice done to our American boat yards and boat owners by this tax, yachts built abroad for citizens of the United States and brought into the country on their own bottoms are not only *not* required to pay this tax, but are admitted *duty free* and can get American registry.

Now as a revenue producer this tax on new building is a joke. It produced last year only $267,079. Just a paltry amount. Yet the effect of the tax has been that the yards building pleasure boats are operating today at less than 1-3 of their capacity, and no industry can operate on 1-3 capacity for any length of time and survive. To show the effect of the tax on building one need only glance at the table showing the revenue collected the last three years and the amount of building done in that period. At the same rate of decline the government will collect almost nothing next year.

Fiscal Year	Revenue from Sales Tax	Amount of New Building
1921.....	$553,201.63	$5,532,016
1922.....	406,867.90	4,068,679
1923.....	267,079.97	2,670,799

In 1921 strenuous efforts were made to get a modification in this tax and some relief, both to boat users and boat builders, appeared possible. But any change in the bill at that time was effectively killed by some of the Western representatives, who could not distinguish between a luxury tax and the killing of an important industry. This year, with Secretary Mellon's bill for a revision of taxes, there is hope that this tax may be removed entirely. The Secretary has urged a sweeping reduction in all nuisance taxes and those which brought insignificant revenue and were causing distress in certain industries. This tax clearly comes under this head. We hope and believe the Ways and Means Committee will report favorably on the abolition of this building tax at this session. Whether its recommendation will get by the House is another matter.

Therefore, it is up to each and every one of you men who own boats and who want to see the best of all sports grow, and who want to be able to buy new boats when

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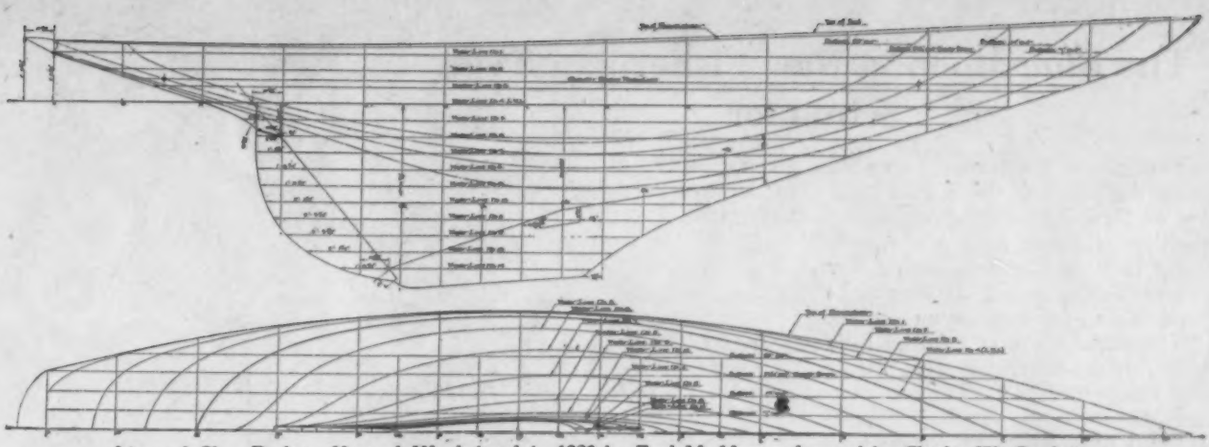


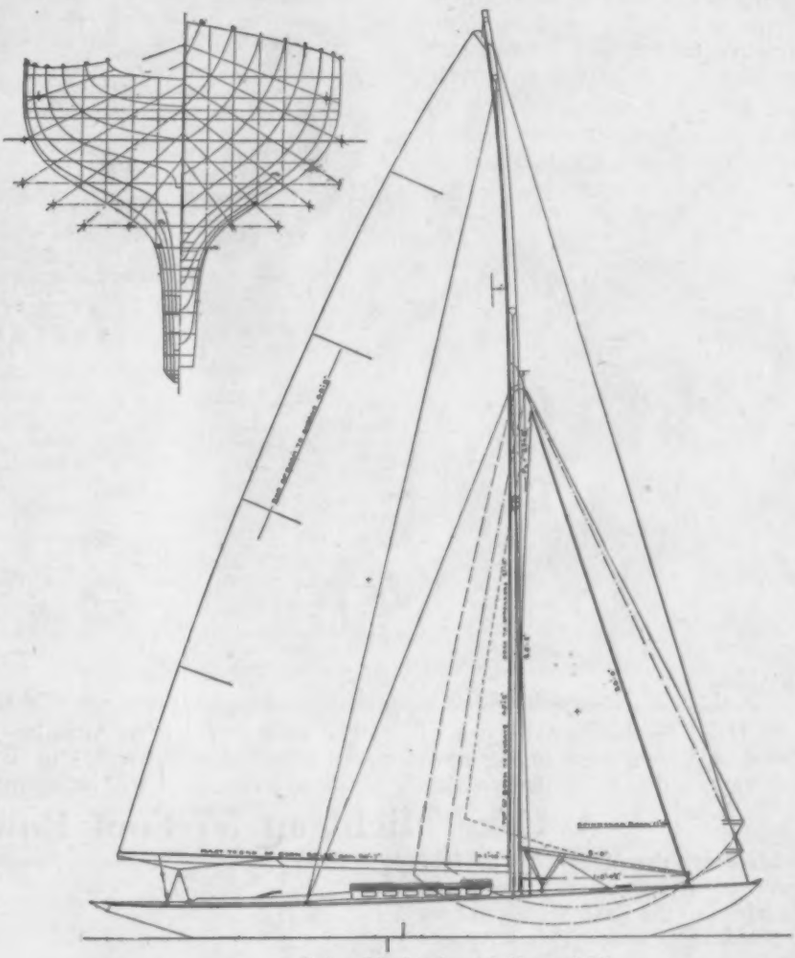
Lines of Class R sloop *Hayseed VI*, designed in 1923 by Fred M. Hoyt and owned by Charles W. Goodwin.

Hayseed VI, a Class R Sloop

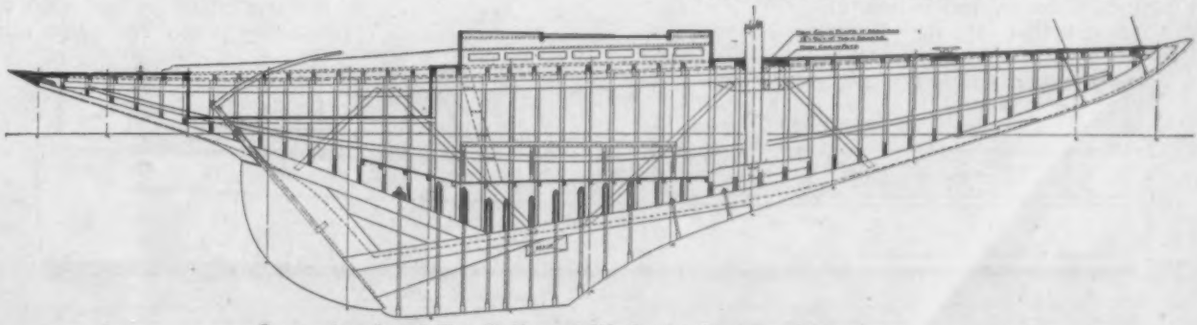
We are particularly fortunate in being able to publish herewith the lines, as well as the sail and construction plans, of a Class R racing boat, designed and built by Frederick M. Hoyt, N. A., for Mr. H. L. Bowden, of Boston. The R Class has been and is still deservedly popular, and on those rare occasions when we get hold of the full plans of such a boat they are always studied carefully by racing yachtsmen. The dimensions of this boat are as follows: L. O. A. 35 ft. 9 in., L. W. L. 24 ft. 9 in., beam 7 ft. 8 in., draft 5 ft. 7 in., sail area 596 sq. ft., disp. 10020 lbs.

A study of her lines shows an unusually well formed boat with moderate ends and unusually sweet fore and aft lines. The forward sections are fairly full and there are no reverse curves in her anywhere. She is an excellent example of boats built under our Universal Rule. The method of construction is shown and it will be noted that in addition to fairly close spacing of the frames, she is tied together with diagonal straps on either side.

Hayseed VI is now owned by Mr. Charles W. Goodwin, of Hartford, and she will be sailed on Buzzard's Bay next summer. In last year's racing at Marblehead she was always "in the running" in the season's racing.



Sail and body plans of *Hayseed VI*.

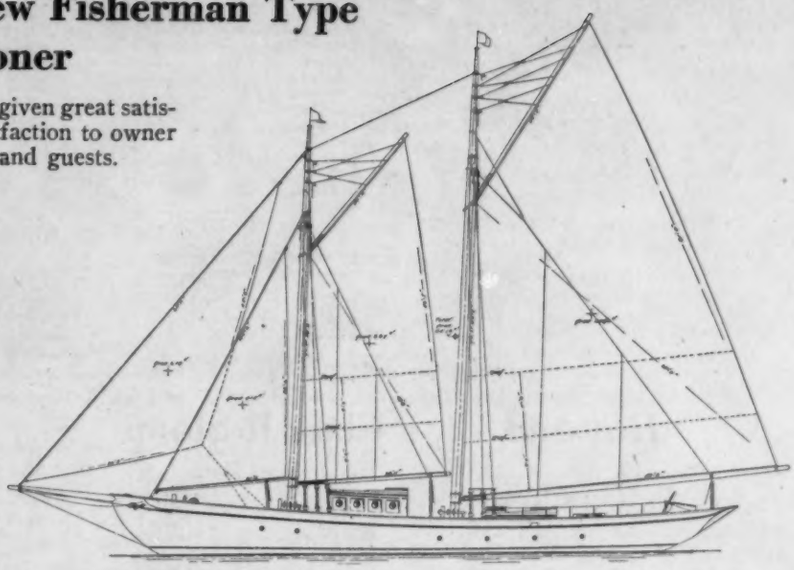


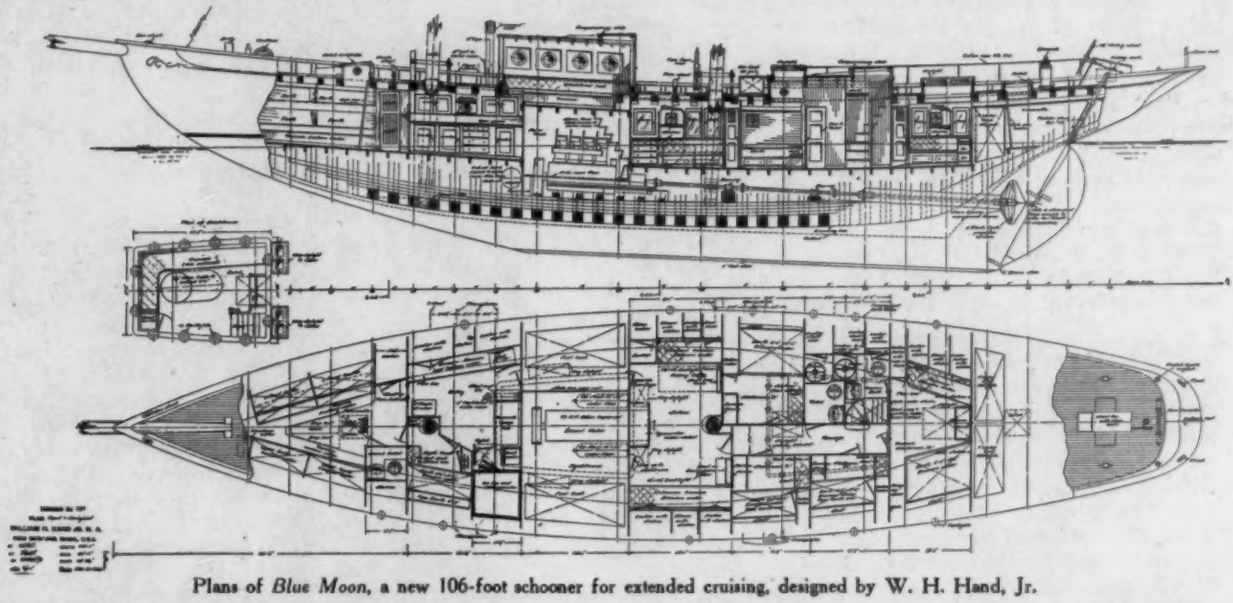
Construction plan of Class R *Hayseed VI*, showing framing and strapping.

The *Blue Moon*, a New Fisherman Type Schooner

The plans illustrated herewith, from the board of Wm. H. Hand, Jr., of New Bedford, Mass., are of the new schooner *Blue Moon*, now being built at Camden, Maine, for Marie T. Crawford, of Buzzard's Bay, Mass., for long ocean cruises.

The *Blue Moon* is a husky little vessel of the fisherman type, plainly but neatly finished, with construction details of the sturdiest character and lines which insure comfort and seaworthiness at sea. She carries a deck house between the fore and main, arranged as combination lounge and dining room—a most attractive feature and a fine addition to a cruiser of this character. This plan was first employed by Mr. Hand in the *Ladona*, one of the fleet which went to Bermuda last year, and is a detail which has given great satisfaction to owner and guests.



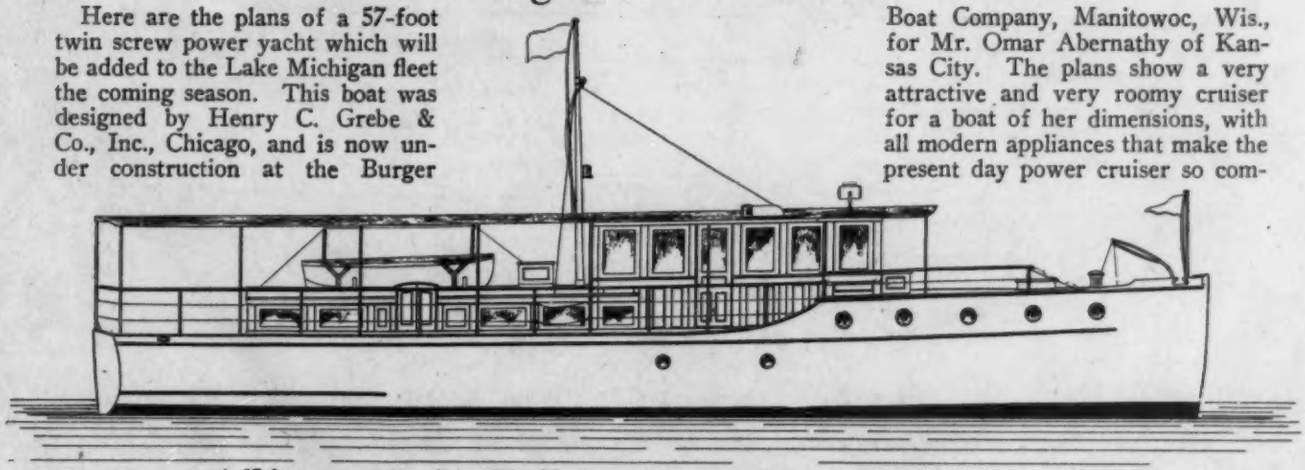


Plans of *Blue Moon*, a new 106-foot schooner for extended cruising, designed by W. H. Hand, Jr.

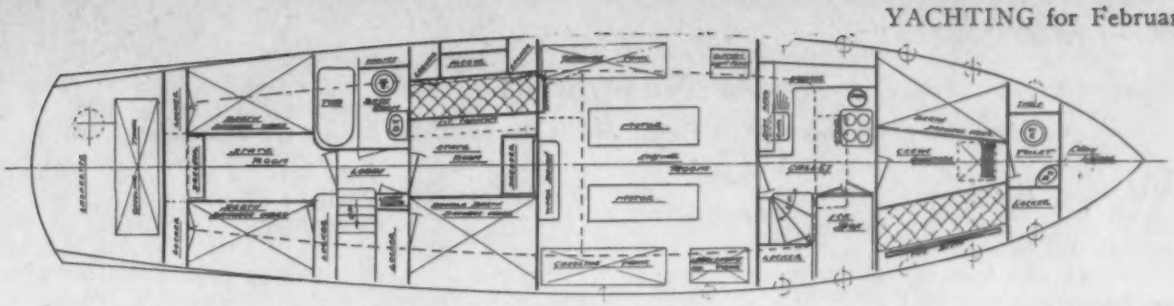
The main engine is an Atlas Imperial Diesel, 4-cylinder, 8½ in. x 12 in., and the speed will be about 8 knots. The dimentions are: l.o.a. 106 ft., l.w.l. 84 ft. 6 in., beam 22 ft. 6 in., draft 12 ft. 6 in.

A Lake Michigan 57-Foot Power Cruiser

Here are the plans of a 57-foot twin screw power yacht which will be added to the Lake Michigan fleet the coming season. This boat was designed by Henry C. Grebe & Co., Inc., Chicago, and is now under construction at the Burger Boat Company, Manitowoc, Wis., for Mr. Omar Abernathy of Kansas City. The plans show a very attractive and very roomy cruiser for a boat of her dimensions, with all modern appliances that make the present day power cruiser so com-



A 57-foot power cruiser, designed for Mr. Omar Abernathy, of Kansas City, by Henry C. Grebe & Co.



Accommodation plan of 57-foot power cruiser for use on the Great Lakes.

fortable and reliable. She will be 57 feet long overall, 13 feet 6 inches beam and 3 feet 6 inches draft. The latter dimension will enable her to go down the Mississippi River to Florida for the Winter.

She is very attractively laid out, as a study of the plans will show. The engine room is well laid out and has an electric light plant and water pressure system. Her power will consist of two 6-cylinder medium duty Scripps motors of 60 h.p. each, which will give her a speed up to 14 miles per hour. The motors will have electric starters and all controls will lead to the steering wheel in the deckhouse. There will be a double thickness watertight bulkhead between the engine room and the owner's quarters, which are next aft.

The deckhouse, 15 feet in length, will be used as a dining saloon.

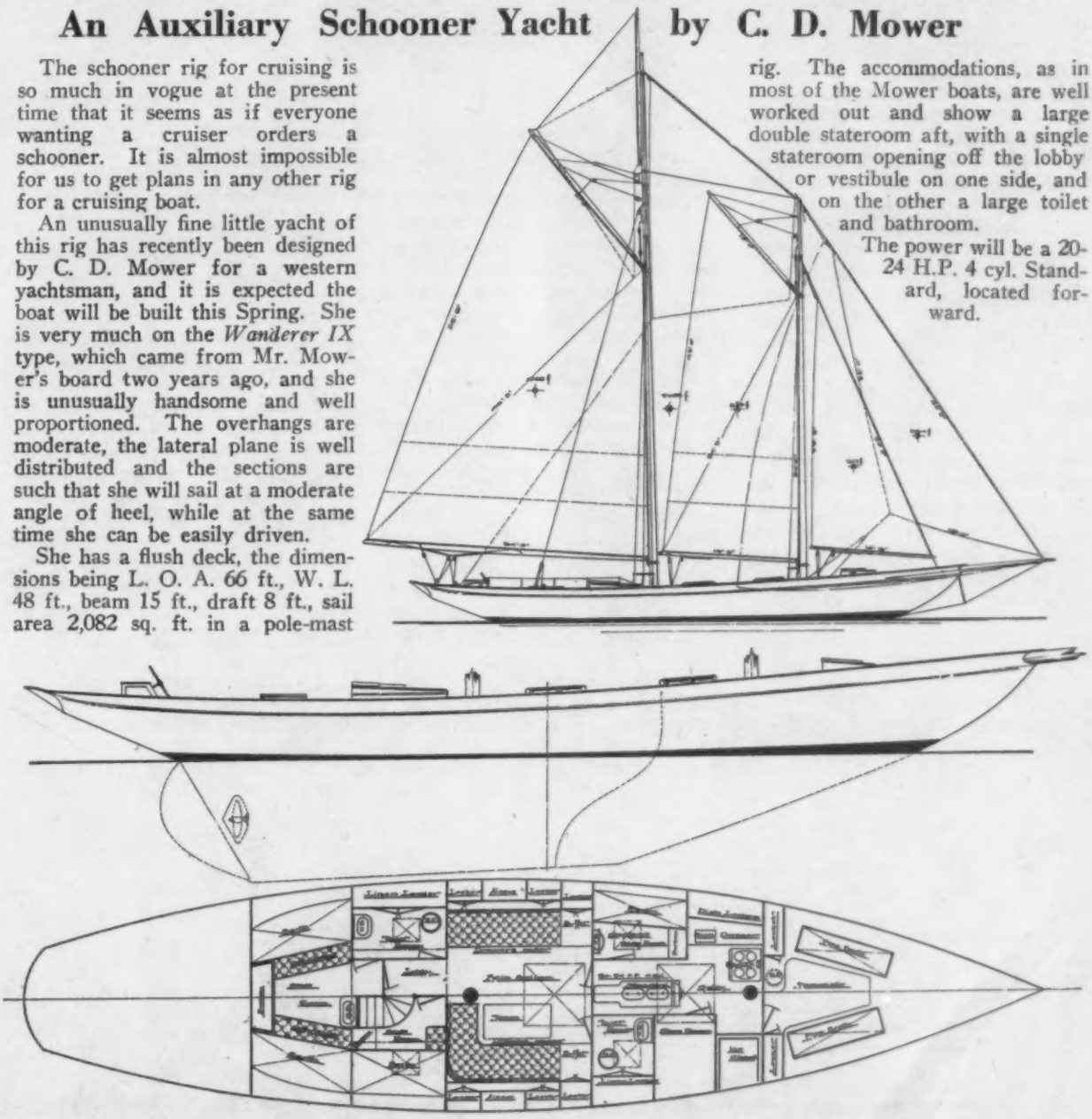
An Auxiliary Schooner Yacht by C. D. Mower

The schooner rig for cruising is so much in vogue at the present time that it seems as if everyone wanting a cruiser orders a schooner. It is almost impossible for us to get plans in any other rig for a cruising boat.

An unusually fine little yacht of this rig has recently been designed by C. D. Mower for a western yachtsman, and it is expected the boat will be built this Spring. She is very much on the *Wanderer IX* type, which came from Mr. Mower's board two years ago, and she is unusually handsome and well proportioned. The overhangs are moderate, the lateral plane is well distributed and the sections are such that she will sail at a moderate angle of heel, while at the same time she can be easily driven.

She has a flush deck, the dimensions being L. O. A. 66 ft., W. L. 48 ft., beam 15 ft., draft 8 ft., sail area 2,082 sq. ft. in a pole-mast rig. The accommodations, as in most of the Mower boats, are well worked out and show a large double stateroom aft, with a single stateroom opening off the lobby or vestibule on one side, and on the other a large toilet and bathroom.

The power will be a 20-24 H.P. 4 cyl. Standard, located forward.



The plans of a 48-foot w. l. auxiliary schooner yacht, designed by C. D. Mower. She would make a fine boat for the Bermuda Race.

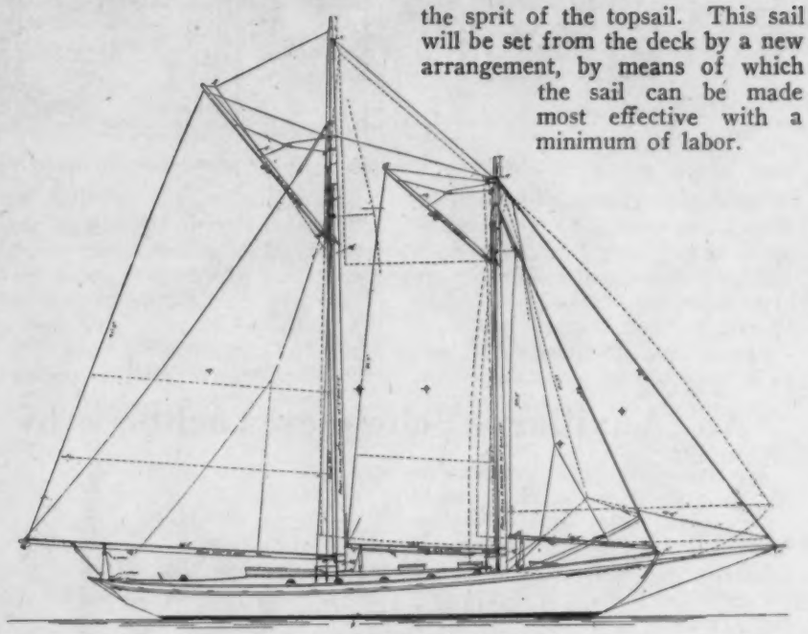
A New Malabar

Number Five of the Series Being Built by John G. Alden for His Own Use

WHEN the *Malabar IV* sailed from Thomaston harbor the last of April, 1923, her designer, John G. Alden, immediately started planning a new boat for the coming season and continued to do so throughout the entire Summer. On disposing of *Malabar IV* last Autumn to a Providence yachtsman, F. L. Jenckes, work was at once begun on a new design.

"The only difference in the model of the two boats," writes Mr. Alden, "is that the moulds forward of amidships are each spaced two inches further apart, making the new boat about two feet longer overall and 18 inches longer on the waterline, giving her an overall length of 49 ft., waterline length 37 ft., beam 12 ft., and draft 7 ft. The only other change of importance in the hull design was to increase the outside ballast from 9,000 lbs. to 12,000 lbs. The interior is also very similar, except that the two after rooms and main cabin are somewhat larger."

After building four boats for his own use without a motor, *Malabar V's* designer has at last succumbed and is now installing a 15-30 h.p. Scripps motor with which he expects to get a speed under power of 6 knots an hour. In this connection he says: "I do not really need an engine and probably will not use it, but am simply putting it in in order to demonstrate that the performance of this new boat will not be hurt by it. I am very skeptical over the statements made that the hole in the deadwood and drag of the propeller make any material difference in a boat's speed, except where a solid three-blade wheel is used.

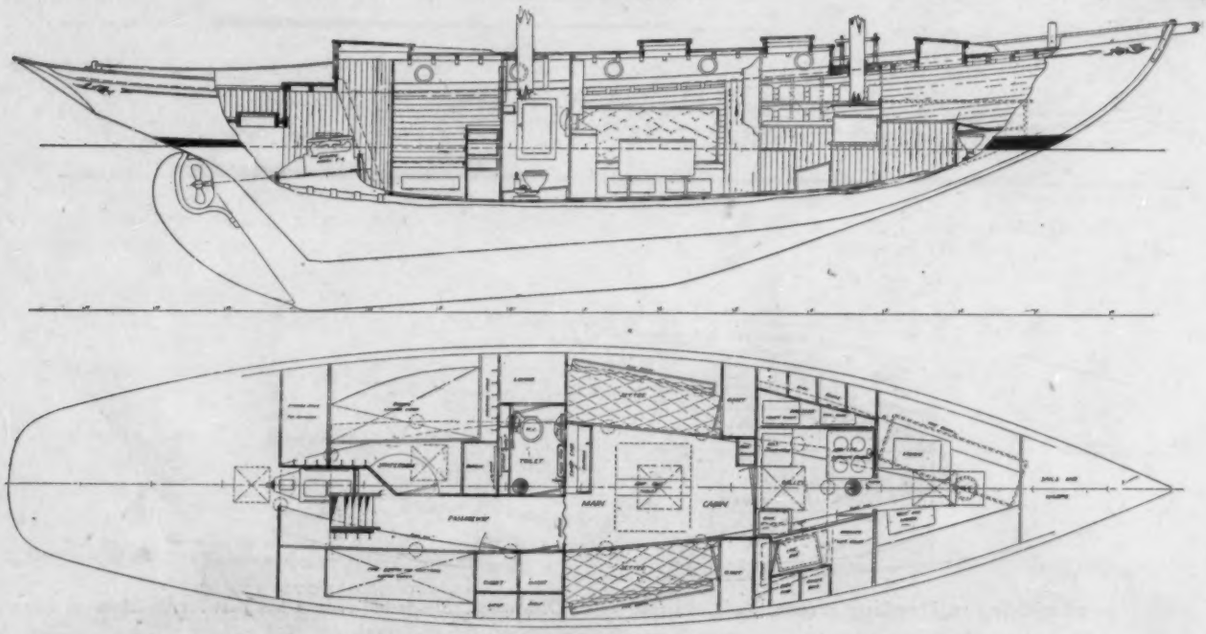


Sail plan of *Malabar V*.

the sprit of the topsail. This sail will be set from the deck by a new arrangement, by means of which the sail can be made most effective with a minimum of labor.

"The new boat will have about 100 ft. more sail than *Malabar IV*, but on account of her additional 3,000 lbs. of outside weight will be somewhat stiffer, and should be faster. I have always been a great believer in light sails, and in this boat have raised the mainmast higher than on *Malabar IV*, thereby making it unnecessary to use

"While admitting the many good points of the straight fisherman type of boat, I believe that its use in medium size yachts is strictly limited, for a number of reasons. Primarily, the bulk of the inside ballast is so high that it spoils the headroom so that very little accommodation can be had except under fairly high and wide cabin houses. Moreover, the straight fishing schooner has, without exception, a low freeboard amidships, so that the hull weights are not as high as with a high sided, flush deck yacht. Therefore, on all of my cruising



Inboard profile and accommodation plan of a new *Malabar* type auxiliary schooner, designed by J. G. Alden.

schooners I favor a liberal portion of outside ballast, and each year obtain better results by increasing this ratio. *Malabar V* will carry about 60% of her ballast outside, while *Damaris* (ex-*Malabar I*) had only about 25%. The present boat will be much stiffer, and, in my opinion, will be a better boat in every respect.

"The above statements, of course, are meant only to apply for yachts under 70 ft. overall length. In the larger sizes I favor a much larger ratio of inside weight, especially where an effort is made to cut down the building cost."

Malabar V is nearly completed at the yard of Charles Morse & Son, Thomaston, and will be brought to Marblehead in April.

LETTERS AND CORRESPONDENCE

Time Allowances for Ocean Races

Dear Mr. Editor:

Thanks for the invitation at the end of Mr. Hand's article in the December issue; it gives me an opportunity to put in my oar.

When the 1923 Honolulu race was proposed I was requested, at a meeting of the committee, to propose a suitable rule of measurement under which to rate the yachts for this very important event. At the time I proposed the rule which has been called the modified Seawanhaka rule, in that it takes the L.W.L. + ½ the overhang + the square root of the sail area, divided by 2. I also suggested that, in view of the race being largely if not entirely off the wind, to take 60 per cent. of the time allowance as given in the table of time allowances.

At the same meeting I was requested to communicate with some of the Eastern designers and secure from them their views on this matter, which was done. I received replies from all, the reply from Mr. C. D. Mower being the same as my original rule except that he proposed giving the full allowance as provided in the time allowance tables. The results of the race justified his suggestion and this was the system of measurement used, together with the full time allowance.

I have never been able to see the justice in the handicaps as used in the Bermuda and Honolulu races, where an arbitrary allowance of so much per foot of overall length, or any other length, for the race was given with no variation in the amount as the yachts decreased in size. To see the injustice of such a rule one need only look at the time allowance tables to see that a 45-foot boat gives a 40-footer almost twice the allowance that a 75-footer would give a 70-footer, and yet there is the same difference in size, namely, five feet.

Whatever rule is used, and I have yet to see an improvement on the present Universal Rule or the modified Seawanhaka for long distance racing, I can see no reason for adopting an arbitrary allowance in place of the full allowance as given in the table of time allowances.

In the Honolulu race the difference between the first and last yacht was 72 hours (approximately) corrected time. In the Bermuda race it was 64 hours (approximately) corrected time, and yet the Honolulu race was 3.28 times as long as the Bermuda race.

EDSON B. SCHOCK,
Los Angeles, California.

Are There Any Figures on Relative Performance of Gaff and Marconi Rigs?

Editor Yachting:

President Kraft of the Lake Michigan Yachting Association has appointed me a member of a committee to get together information regarding Marconi rigs in Eastern waters.

The conditions on Lake Michigan are that in some classes there are one or two boats with a Marconi rig, while the rest are gaff rigged. With these conditions, it will be impossible to separate the classes, and what we want to find out is what sort of equalizing arrangement has been made when the two types of boats race together. Can you give us the information regarding how it is worked out in the eastern waters?

I will appreciate very much any information that you can give me for the benefit of the Lake Michigan Yachting Association.

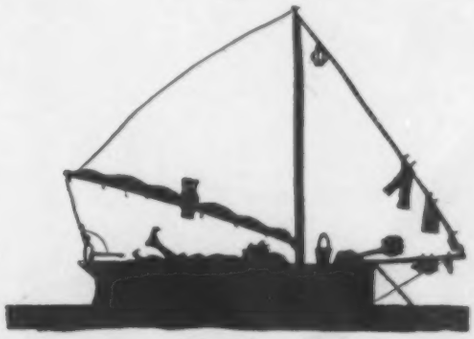
FRED D. PORTER.

There is no data on hand here in the east on how these rigs can be raced together on an equitable handicapping basis. Any figures that might prove fair for certain conditions would not hold in other conditions. If any of you racing yachtsmen have made a study of this, and have kept figures on the relative performance of the two rigs racing together, shoot in the information. It is needed.—EDITOR.

Port Washington Yacht Club Officers

The Port Washington Y. C. held its annual meeting January 12th. The following officers were elected for 1924: Commodore, Arthur T. Vance; Vice-Commodore, Fred J. Mowry; Rear Commodore, G. W. Elder, Jr.; Secretary, James Dinn. Governors to 1926: E. W. Dusinberre, Fred Walsh, and William Miller. The club had a most successful year from every angle. It made many improvements to its property, including the building of a new dock. Its membership is larger than ever before and its yachting activities are greater.

Getting under way.



The night watch.

In the Lee of the Long Boat

THE annual Motor Boat Show, held this year in the Grand Central Palace from January 4th to 12th, was voted a big success by a large majority of the exhibitors. The attendance was larger than ever before and actual sales were reported from all quarters. What interested me as much as the many attractive exhibits was the crowd. They came from everywhere. I talked to enthusiasts from Florida and Maine, from Halifax and San Francisco, from Toronto and Chicago. While there were many "old hands" snooping around, I am convinced, after comparing notes with several exhibitors, that ninety-nine per cent. of the 75,000 people who attended were greenhorns — but, mind you, greenhorns who were interested enough to leave 75c per with the gate keeper. That simply means that more and more people are becoming interested in the game, both power and sail, something which has been apparent in many quarters for some time. Designers and builders are busy, one-design and restricted classes are multiplying, and there is great enthusiasm shown already over events scheduled for the coming season. So stand by, boys, we are on the threshold of a big season, with many more to follow.

* * *

It simply can't be helped. No one wanted to go to Halifax, or Norfolk, or Annapolis, but a surprising number of people came out strong for a Bermuda Race this year, and even handed in entries before the Committee had decided to repeat the race. So we'll go to Bermuda again this year. The Committee is busy changing and adding to last year's rules. New boats are being rushed to completion. Navigators and crews are signing articles. Eleven signed entries have already been received. Judging by the interest displayed so far, the number of starters facing the gun on June 21st will not fall far short of the record-breaking fleet of 22 boats which put the calamity howlers to rout last year. Wouldn't it be a "wow" if there were more than twenty-two!

* * *

While the jib-headed rig is undoubtedly gaining ground on the gaff rig for cruising boats, there will always be differences of opinion on the subject, both by the theorists and the chaps who do the real sailing. As an illustration, the four Austrians who brought the jib-headed *Sowitasgoht* over from Hamburg have stated that they would use the gaff rig if they had the job to do over again, while Alain Gerbault, who crossed the pond alone with the gaff rig, is installing a jib-header on his cutter *Firecrest*, with which he expects to cruise through the Panama Canal and on to the South Seas, and possibly continue on until he has out-Slocumed Slocum. Gerbault's experiences with the new rig on the same hull which formerly carried the gaff rig should prove decidedly interesting and instructive.

* * *

Just as people disagree on the subject of gaff *vs.* jib-header, so do they disagree as to the amount of power which should go into an auxiliary. One spectator aboard the Casey sloop at the Show glanced at the one-lung Lathrop under the companion steps and remarked, "Gee, but that's a whale of a motor for a small boat, all right." Not five minutes later another bug inquired of the attentive salesman, "Say, why don'tcha put a bigger engine in this here boat?"

* * *

Charley Marsland, the genial skipper of the good ship *Azor*, has again issued a challenge for the Brooklyn Challenge Cup. The present holder of the cup, the American Yacht Club, will undoubtedly defend with "Stuyve" Wainwright's *Butterfly*, the winner in several hard fought contests. Incidentally, I hear that the Committee is considering modifying the rules a bit so as to allow entries of such boats as the New York 30's, Bar Harbor 30's, and a few others which just barely lose out on qualifying under the restrictions as now drawn. If this is done, there should be a fine fleet fighting it out in an ocean race second in importance on the Atlantic Coast only to the Bermuda Race.

* * *

It seems a pity that the growing fleet of 2-stickers won't be represented, due to the fact that it has been amply demonstrated in the past that they are outclassed by the fast sloops. Why not have a special cup, and a special class, for two-stickers alone, to be sailed for at the same time, and over the same course, as the Brooklyn Race? Marty Kattenhorn would undoubtedly enter *Surprise*, John Alden would probably show up with *Malabar V*, Ford and Payne could enter their new Roue-designed schooner, yawls like *Solita, Jabberwock, Laura* and *Mischief* would be fit contenders, and there are plenty of others which would come in and make things interesting. If some club, or some two-sticker enthusiast, will provide such a trophy, I feel positive the affair would be a great success, and I'd be glad to do anything possible to boost it along.

* * *

A number of enthusiastic letters have come in relative to my suggestion for a designing contest, and Skipper Herb has about decided to see the deal through. We'll have to get busy and form a committee to draw up the conditions and stand by to make the awards. My idea is to make it a small auxiliary cruiser, a good sailer primarily, in which two or three people can do lengthy cruising in comfort. Size and rig optional. Cost of construction and upkeep to be considered. If you don't like this dope, write in and give us your ideas on the subject.

Building a Miniature Yacht by the Plank Method

A System of Framing and Planking Used in Building *Polka Dot*

By J. L. WILSON*

NEARLY all model yachtsmen build their own boats and if you happen to be one who does not, try it on the next one and see if you do not get more fun out of the sport. If you want to build, the chances are that you can't decide whether it will be a dug-out or a framed and planked model, but for anything in class "C" or larger planking seems to give better results and from the following description of *Polka Dot,* it will be seen that such construction is not difficult as compared with the dug-out system.

A dummy or form is first made up on a convenient table. The table represents a plane parallel to the waterline at the highest point of sheer, which is usually the top of the stem piece. Besides being flat and smooth provision should be made to prevent this table from warping or winding becaues it is the basis or reference plane for the whole model. It should be a little longer and wider than the extreme dimensions of the finished boat and should be marked with a centerline and cross station lines corresponding to the stations on the lines of the model.

On this table molds are erected for the dummy because the dummy is to be planked over solid molds. The molds are perfectly cut from hard wood to templates made from the body plan with due allowance all around for the planking and framing of the model and the planking of the dummy. Of course these molds are full, that is for both sides of the boat, and allowance is also made for the insertion of the keel or deadwood.

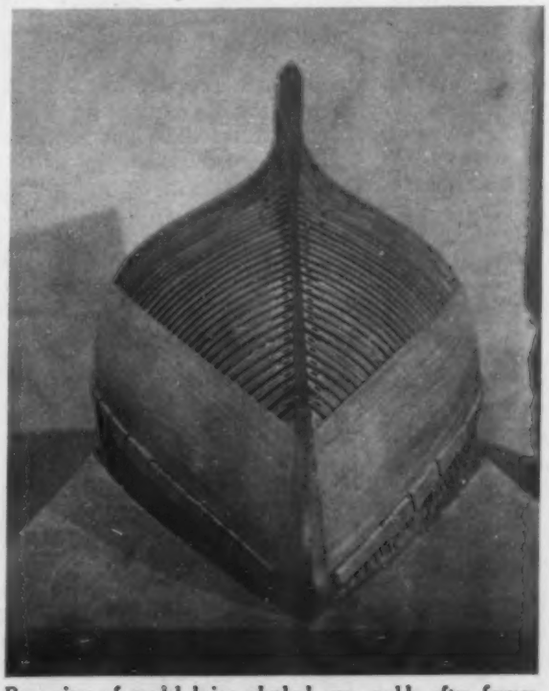
As a proper guide to allowances for plankings, etc., we are giving the following for *Polka Dot.* The planking and framing are each 1/16 inch in thickness while the planking of the dummy should be about ⅛ in. if the molds are about 4½ in. apart and more if they are of greater spacing. The molds as described will then be at least ¼ in. smaller all around than the real section of the model but they should extend up, so to speak, to the exact level for which the table was constructed.

These molds are attached to the table readily by cleats and since they have thickness they will have to be beveled to receive the planking. The reason for using hard wood in the molds is to prevent warping and for the same reason the dummy planking should be put on immediately. This may be done in any convenient manner, since it is not treated as a finished model. Secure the planks with brads countersunk sufficiently to allow sand papering, as the surface of the dummy should be fair and smooth.

Building a planked model over mold, showing method of setting up.

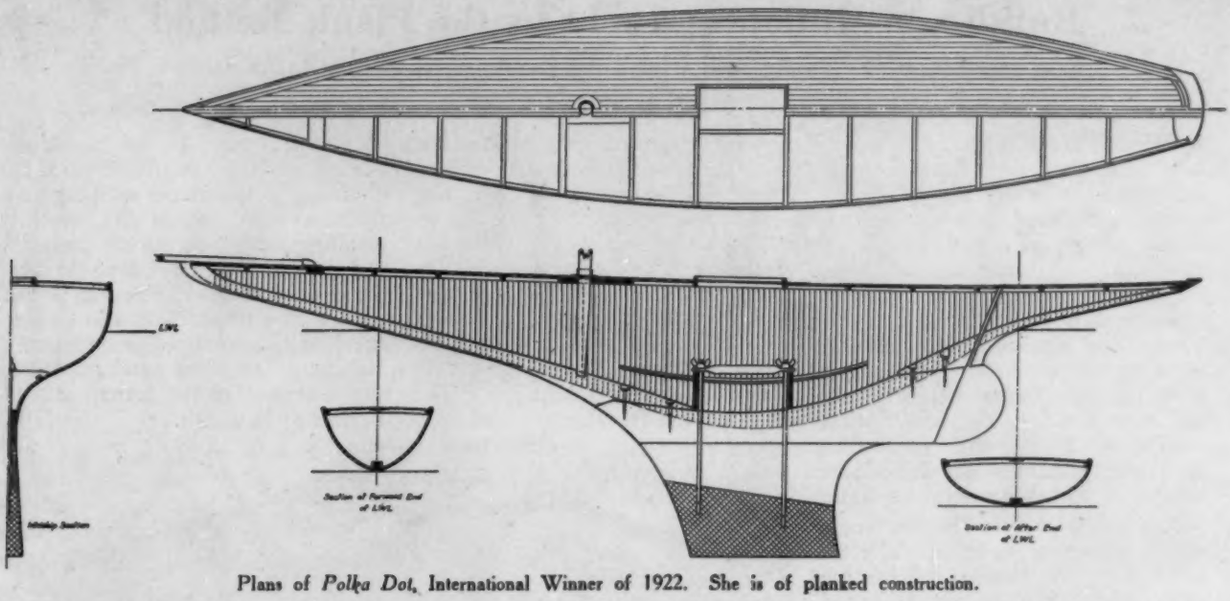
The forward and after pieces of the keel, together with the deadwood or solid midship portion, having been shaped, with rabbet for frames and planks, and fastened permanently together, are now inserted into their place in the dummy and secured to the table. The stem is readily secured by a screw from below but the securing of the transom should be done in some other

* Data furnished by Mr. J. B. Ketcham, Commodore, Prospect Park Model Yacht Club.



Bow view of model being planked over molds after frames are in place.

Stern view, showing method of fastening frames and fitting plank at transom.



Plans of *Polka Dot*, International Winner of 1922. She is of planked construction.

way to protect its upper surface. A convenient method is to leave ears or lugs on the tops of the transom when shaping it and secure these to a block on the table to give it the right elevation off the table. The transom itself is secured permanently to the after end of the keel before placing on the dummy and care should be exercised in ending the dummy planks so that it can be readily moved up and down before securing. This insures removal of the completed boat from the dummy.

The dummy is now covered with glazed paper or any other convenient substance to prevent the model sticking to it after gluing. No paper or anything else should extend over the surface of the keel pieces, deadwood or transom because the frames and plank ends are to permanently fastened at these points but only temporarily glued together throughout the remainder of the body.

Beginning amidships on both sides and working both ways at once the frames are bent on and tacked in place. In order to do this without breaking them they should be prepared to the finished size and soaked in boiling water for a few minutes to become pliable. Do not drive tacks down to the heads because they are to be removed in the planking process, but permanently secure the foot of the frame to the keel if dowels are to be used for fastening; if not, it is better to use temporary fastenings until fully planked.

As the ends are approached the frames should be canted or inclined somewhat to keep them normal to the skin of the boat because such thin members cannot be beveled conveniently. Although it is convenient to place the adjacent frames next to each other in the sizes with which we are dealing, they may be spaced their own width apart. With frames 1/16" by 3/8" this means a frame every 3/4" apart. It is considered weakening to exceed 1" spacing with as thin planking as 1/16" finished.

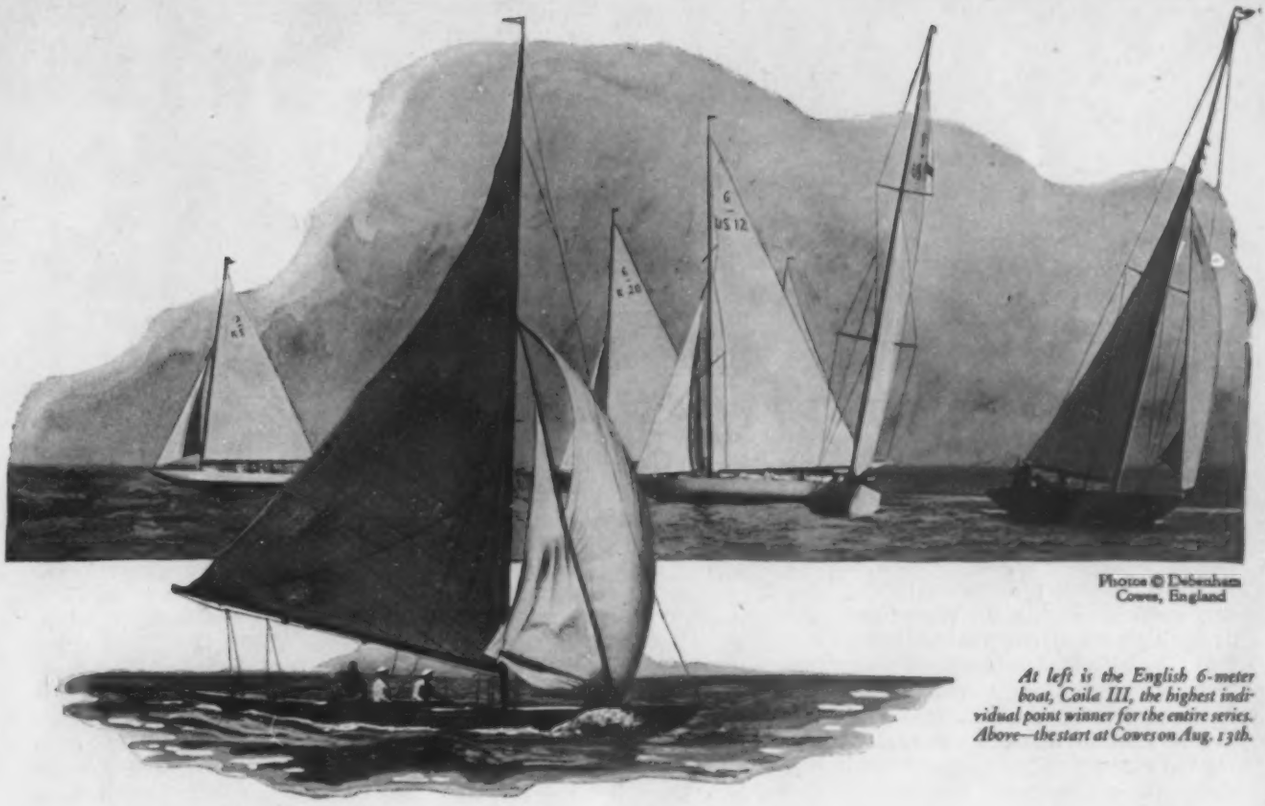
The sheerstrake or top plank is the first one to attach and its location should be carefully marked on the dummy so that when finished it will present a fair sheer line. A fairing batten will be found very useful in planking. Use this freely as no amount of descriptive matter will make good planking. The planks are glued on the frames and permanently fastened at the ends. There is only one thing necessary in planking—namely, to remove all tacks as you go along because they are securely holding the frames to the dummy.

A few of the difficult points will be: first, in shaping the keel pieces and securely fastening them together so that they are perfectly in line. The importance of this will be fully realized. Next you will find a point at the stem or keel where the frames cease to enter the rabbet and consequently the latter should be cut only deep enough for the planking. At the transom also the rabbet is only sufficient to take plank ends. Where the deadwood molds into the hull at the after body, about where the rudder tube is located, a little ingenuity will be required to end the planks properly to avoid excessive twisting or splitting. The splitting tendency is also noticeable at the deadwood on the lower planks amidships and it is good practice here to jog the rabbet for plank ends only.

When the planking is completed and the model removed from the dummy, tear out the paper, and fit in the corner log all around the inside of the sheerstrake and frames, using filling pieces between the frames. This will provide a means of cross tying while fastening the planks to the frames.

There are in general two methods used in fastening—pins and dowels, the latter being similar to the regular practice of using treenails. *Polka Dot* was fastened with pins of small size cut short to allow just enough point for clinching inside. Two of these were used at the crossing of each plank with each frame and they were staggered. If the frames are put in adjacent to each other it is suggested that one pin for each will be sufficient. Treenails are made easily by cutting a hardwood tapered toothpick in half, which provides two. If these are used it is better to drill for each one with a tapered reamer or by using a tapered awl and before inserting the dowel it should be dipped in glue or shellac.

The remainder of the details in connection with the construction of this model are similar to any other except perhaps in reinforcing the sides at the floors holding the lead ballast bolts. These floors carry tubes for the bolts and connect at the bilge with two short stringers to distribute the thrust over a number of frames and thus preclude the possibility of bulging. Several different woods are used in construction—namely, white pine for the deadwood and deck, mahogany for the keel pieces, transom and deck.



Photos © Debenham
Cowes, England

At left is the English 6-meter boat, Coila III, the highest individual point winner for the entire series. Above—the start at Cowes on Aug. 13th.

All Eight Boats in the International Six-Meter Race were Valsparred!

One of the greatest tributes ever paid to an American product is the fact that every one of the eight boats—British and American alike—that took part in the International Races at Cowes, England, last August was Valsparred.

This was, indeed, unusual proof of Valspar's unquestioned superiority.

This fine, sturdy varnish gives absolutely dependable protection against water and weather. After months of service on a hull or deck, it still gleams bright and smooth; and no amount of fog, salt spray or rain can ever turn it white. Valspar's toughness and waterproofness have won it an unequalled international reputation. On Solent or Sound the best boats are varnished with Valspar.

* * *

Some confusion has arisen concerning the varnish used on the 6-meter boats in the International Races held last August at Cowes, England.

To clear up any misunderstanding, we are glad to publish the facts in the case, which are given above.

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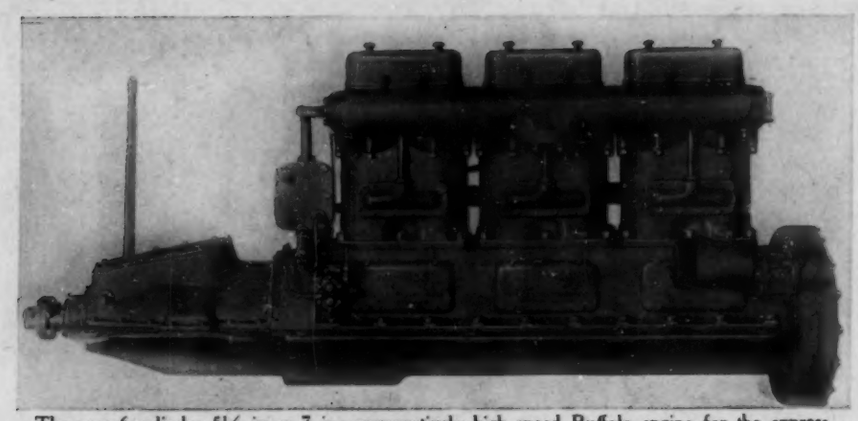
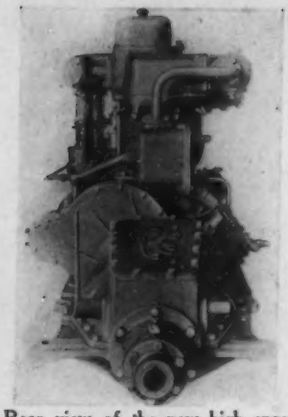


The new 6-cylinder 5½ in. x 7 in. conservatively high speed Buffalo engine for the express cruiser or runabout.



Rear view of the new high speed model R Buffalo.

OF INTEREST TO THE SKIPPER

The New Buffalo Express Cruiser Type Motor

In announcing their latest product, a 6-cyl. 5½" x 7" conservatively high speed engine, the Buffalo Gasolene Motor Company feel that they are offering something of special interest. Realizing the gap in the Buffalo line for an engine for the express cruiser or large runabout, these pioneers in marine engine building have endeavored to combine the acknowledged greater reliability and durability of the medium speed and slow speed types with the otherwise desirable features of lighter weight and higher propeller speed of the high speed type. The result is the new model "R" Buffalo, a conservatively high speed engine possessing the reliability, durability and economy of the other types of Buffalo engines, but developing greater horsepower with comparatively light weight.

The pictures herewith tell their own story. The engine is a clean, compact unit. One feature that will appeal particularly to the architect and boat builder is the fact that this engine does not require a high foundation, the distance from the center of the crankshaft down to the bottom point being much less than usual in engines of this type.

The choice of either aluminum or iron base and crankcase is offered, the price being the same, the only difference being in the weights, which is about 550 pounds, the weight with aluminum base being 2035 pounds and with iron base about 2600 pounds.

This engine, described briefly, is a 6-cyl. 5½" bore by 7" stroke, valve-in-head type. Cylinders are cast in pairs and of gray iron, with completely machined combustion chambers. Water jackets extend full length, from top to bottom of the cylinders, cooling the pistons for the entire length of their travel. The jackets are provided with clean-out plates for easy removal of sediment.

The cylinder heads are removable and attached to the cylinders by means of nickle steel studs. The cylinder heads contain the valves, there being one intake and one exhaust for each cylinder, of ample area. The shape of the combustion chamber is such that should valve springs or stems break, valve cannot drop in and damage the piston top.

The valve heads are of large diameter and made of a heat resisting alloy steel. The valve seats are completely surrounded by water jacketing. The valve operating mechanism mounted on top of the cylinder head is encased in oil tight enclosures of cast aluminum.

The lubricating system is full pressure type of the dry pump system, a double oil pump being employed. The first, or scavenger pump, draws the oil from the lowest point of the engine base and, passing it through the copper coils of the oil cooler, delivers the cooled oil to a service tank of approximately seven gallons capacity. The second, or pressure pump, draws the oil from the service tank and puts it through an adjustable pressure regulating valve into the oil line supplying the crankshaft bearings, connecting rod bearings, piston pins, timer gears, reverse gear, etc.

Ignition is either the double system with independent battery and high tension magneto operating separate sets of plugs or dual, two-spark magneto, as preferred. Electric starter, including generator, and storage battery, are included in the regular equipment.

This engine is not an untried model. The manufacturers installed two of them, early in 1923, in typical cruisers, one of which was under their close observation, the other in the hands of a prominent Chicago yachtsman, and both were put through the hardest kind of service for the entire season. It was only after this severe test that the manufacturers decided to market the engine as a standard model. On the performance of these two engines and without any solicitation or advertising of any kind, a pleasing number of orders have been practically forced on the manufacturers, and while the production of this new type for the 1924 season will be limited, there will undoubtedly be a great many of the newer boats powered with this model.

Edson's Special Exhaust Hose

The Edson Manufacturing Corporation of Boston, Mass., have recently perfected and placed on the market a new type of exhaust hose for power boats that has proved a great advantage over the old pipe exhaust lines. Ordinary hose has been tried in the past, but has not been found durable. The Edson Company have turned out a special

Edson special flexible exhaust hose, strong and durable.

ROYAL MAIL

"The Comfort Route"

Bermuda

By The New "Arcadian"

Only 48 hours from the chill of winter to the balmy tropical climate of these beautiful flower-decked isles. Bathing throughout the year, golf, tennis, fishing and boating. Sailings every Saturday by the magnificent new ARCADIAN, "The Cruising Ship Wonderful," 19,500 tons displacement. By far the largest and most luxurious liner ever in the Bermuda trade. Moderate rates. No passports required.

West Indies Cruise

By The Palatial "Orca"
February 20th

Down to the sunny tropics and the historic Spanish Main. To lovely islands and picturesque old towns. A fascinating cruise by the palatial ORCA, 25,500 tons displacement. Specially built for tropical service. Itinerary includes Nassau, Havana, Kingston, Panama Canal, Cartagena, Curacao, La Guayra, Trinidad, Barbados, Martinique, St. Thomas, St. Juan, Bermuda. Rates $250 up. No passports required.

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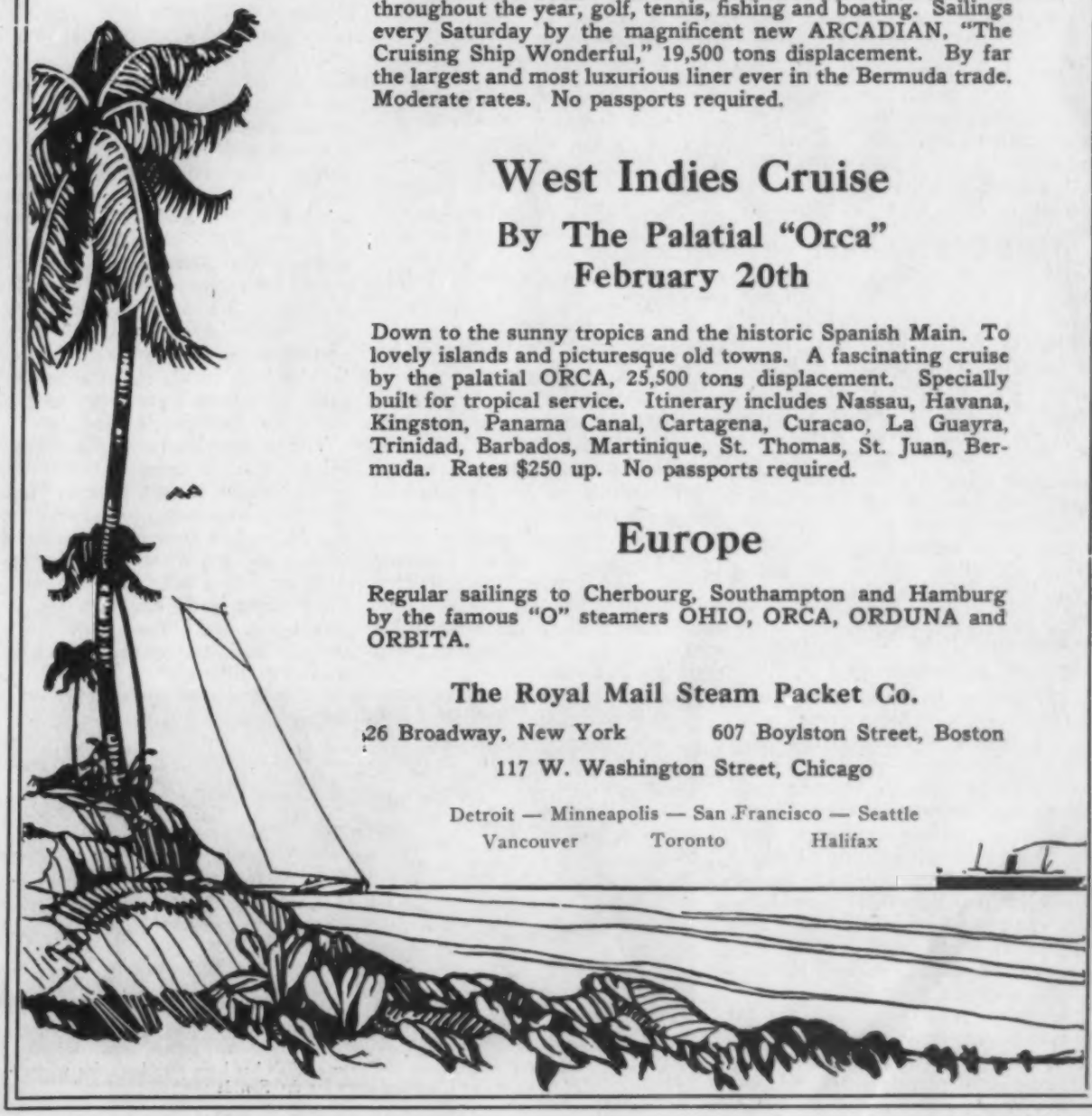


The booth of L. W. Ferdinand & Company, where marine glues, seam composition, and the like were exhibited, was extremely interesting.

exhaust hose particularly adapted to stand hard usage resulting from the combination of chemical action in the exhaust gases and heat coupled with salt water where chemical and corrosive action is so detrimental to iron pipe or ordinary hose.

This hose is reinforced with metal rings throughout its circumference and its installation can be made in a short time, there being no elbows or unions to bother with, and their attendant dangers of leakage. Those who use it say that it will outlast any iron or metal pipe used for exhaust lines. Several of the Boston and Gloucester fishermen, now using this special exhaust hose, have found it has lasted over four times as long as any pipe or other type of exhaust line and gives every indication that it will continue in service indefinitely.

Kelvin-White Navigating Instruments

There were so many interesting exhibits at the Show that one hardly knows what stood out beyond the others in special interest to the yacht owner. That of the Kelvin & Wilfrid O. White Company, of navigating appliances, certainly held the attention of all skippers. This firm outfitted many boats in the Bermuda Race last year, and usually furnish the bridge outfits on boats built or designed by Lawley, Hand, Alden, Herreshoff, Consolidated Company and others.

Everything from course protractors, both plain and patented types, to compass correcters, were exhibited. This latter article is selling like hot cakes, and enables a man to take out any deviation of his compass by the shifting of a few trays of magnets, without the necessity of having the compass compensated by an adjuster. All types of binoculars, underlight compasses and sextants, were to be seen at the Show exhibit of this company.

Cousens and Pratt Move to New Quarters

The opening of the year 1924 finds the old and well known firm of Cousens and Pratt, of Boston, installed in new quarters at 493 C Street, which is in the Brown-Wales Building. This is located within five minutes' walk of their former address, 274 Summer Street. The firm welcomes visitors to their new factory, whose equipment and facilities have been increased to meet the demand for a growing business.

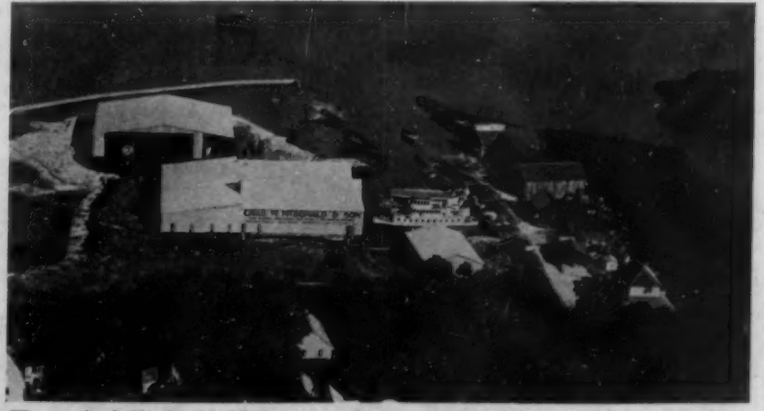
Stearns Marine Engines

Among the engine exhibits, that of the Stearns Motor Manufacturing Company, of Ludington, Mich., stopped all of the motor boat owners. In addition to the former line of Stearns marine models, a new engine was shown, the MER 16-valve motor. This is a 4-cylinder outfit with a number of new features that makes it particularly interesting to the yacht owner.

Florida Boat Yards Prepare for Busy Season

That the winter season is going to be a busy one afloat in Florida and southern waters, is apparent from the activities in Southern boat yards, where all are busy overhauling craft and building new ones. At the well equipped yards of Charles M. McDonald and Son, Daytona, Fla., there is a new 50-foot combination day boat and cruiser under way for Mr. James Gamble, of Cincinnati, Ohio. She has a 16 foot beam with very commodious quarters, and is to be powered with a 54 H.P. Standard motor. The same yard has also launched a new combination cruiser and fishing boat for W. C. Carnegie of Rector, Pa. She is 38 feet long and is powered with a 38 H.P. Elco motor. Although the yard already has three marine railways, two more are being built to take care of the increased business. A picture of this plant, taken from an aeroplane, gives a good idea of the shops and facilities it offers.

The Fogal Boatyard Company, Miami, Fla., is enjoying the most active season it has ever known. The yard hauled out 48 yachts during November-December. Building is an auxiliary schooner yacht for Mr. Frederick Kip of Montclair, N. J. She is 80 feet over all, 30 feet beam, with seven foot draft, outside lead, and is equipped with a 60 h.p. oil engine.



The yard of Charles H. McDonald at Daytona, Fla., has been very busy this winter fitting out and building boats for the Florida season.

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Perhaps, tho', you would prefer a general assortment? Ask for a special tin of "Huntley & Palmers Sweet Assorted".

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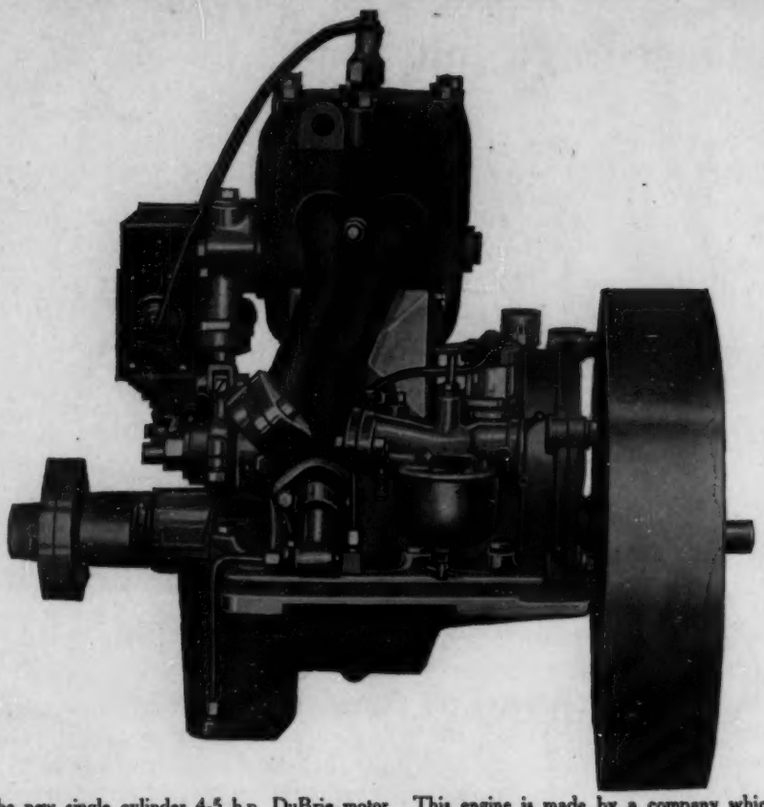

The new single cylinder 4-5 h.p. DuBrie motor. This engine is made by a company which specializes on this one model and size only.

Du Brie Motors Announce 1924 Model

Last year the Du Brie Company brought out a single-cylinder four-cycle motor which immediately became so popular that the makers say they were nearly swamped with orders. These motors have been shipped to nearly every country in the world and they gave such excellent results that the Du Brie Company expect a banner year for 1924. This company is one of the largest exclusive builders of single-cylinder four-cycle marine engines. They devote their entire time to turning out this one size motor in large production.

Du Brie motors are of the inboard type and are suitable for boats from 16 to 30 feet in length. In the larger size boats the power plant recommended is the twin screw installation which has proved especially popular among fishermen who wish to slow down frequently for slow speed in fishing.

The Du Brie motors are equipped with waterproof magneto and battery system and are turned out at the remarkably low price of $112.50 complete, with either system of ignition. A study of the photographs of the motors reproduced here show a well designed engine having hot spot manifold, pump oiling system and hand-hole plate for examination of all parts.

A well designed counterbalanced crank shaft is used and main bearings are extremely large for so small a motor. The engine is rated at 5 h. p. but pulls in excess of this rating, as it turns a 12 in. x 15 in. three-bladed propeller at 1,000r.p.m.

A Correction

In the caption to a photograph of the *Enaj IV*, a new steam yacht owned by Mr. Thomas S. Bennett, which appeared in the January issue, statement was made that she was designed as well as built by George Lawley & Son Corp. This was an error. She was designed by Burgess, Swasey and Paine of Boston, and was built by Lawley & Sons at Neponset.

Winner of Kermath Guessing Contest

Mr. J. R. Bardsley, of Yonkers, N. Y. was the lucky winner of the 16 H. P. Kermath Unit Power Plant at the New York Motor Boat Show. Out of several thousand answers to the guessing contest, Mr. Bardsley was the only one who gave the correct answer, which was $1.68 for the average cost per year for maintaining over 1,400 Kermath motors in service from one to thirteen years. This contest required a good deal of skill and a knowledge of parts for engine maintenance and the answers ran from nothing to $350. There were hundreds of answers around $50, $75, and $100, showing the absolute lack of knowledge on the part of many motor boat enthusiasts regarding the low cost of maintenance for operating a high grade marine engine.

Mr. Bardsley is to be congratulated on winning this $500 engine. Fortunately he happened to be the owner of a 20 x 6 ft. 8 in. raised deck cruiser in which the engine can be installed most successfully.

A New Red Top Model "Thorobred"

The most recent achievement of the Red Wing Motor Co., Red Wing, Minn., manufacturers of the famous *Thorobred* marine motors, is the placing on the market of a 50 H.P. High Speed Red Top model. This engine was shown for the first time at the recent New York Motor Boat Show, where it attracted a great deal of attention and was sold on the spot. A considerable number of orders for early delivery were received there.

In appearance the new engine is very similar to the old and reliable model B 32-40 H.P. *Thorobred*. Many special high speed features are incorporated in its manufacture, such as the use of correctly proportioned light weight reciprocating parts and greatly increased compression. Two sets of spark plugs are provided in the detachable cylinder head, which are fired simultaneously by the dual spark Robert Bosch magneto.

The Red Top is a complete unit power plant with aluminum crank case, oil pan, reverse gear cover and hand hole plates, bringing the weight down to 650 pounds. Bore and stroke is 4½ in. x 5 in. Crank shaft is 2 in. in diameter and is supported by ten inches of main bearings. Lubrication is pressure feed. Electric starter is optional. This new engine will be welcomed by many boat owners who want a high speed, light weight engine that can be relied on to give continuous and uninterrupted service.

Central Park Model Y. C. Elects Officers

The C. P. M. Y. C. has elected the following officers for 1924:

Commodore, John O. Bergh; Vice Commodore, Clarence W. Bedell; Rear Commodore, Harry Johnson; Secretary, Howard Griffiths; Treasurer, Geo. W. Magalhaes; Measurer, Joseph A. Weaver. Trustees, Philip Pile, Fred A. Branag, George Bender.

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DIMENSIONS
25 inches over-all; 6¼ inch beam; 6⅛ inch draught; painted; top side — black, white, gray; under side—green, red in above combination.

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Handling Small Boats at Sea

(*Continued from page* 85)

float type, as it is stronger and stands more wear and tear.

The dimensions of sea anchor for a deep keel boat of about 20 feet waterline should be as follows: Diameter of mouth, 20 inches; length of bag, 30 inches; opening at point, two inches. For larger boats, add for every foot more of waterline one inch to the diameter of mouth and an inch and a half to the length of bag. Increase the width of the opening at point in proportion. A sea anchor with a 30-inch ring should have a point opening of four inches.

A square-mouthed sea anchor of, say, 30 inches in width is constructed as follows: Two flat, wooden or iron bars, each 48 inches in length, are fastened to each other in the middle with a pin swivel. The mouth of the canvas bag in this case is shaped square and rope is sewn all round, leaving a small loop at the four corners in order to haul the bag out taut and secure it to the ends of the bars. If wooden bars are used, put a weight on the sea anchor to sink it to the required depth. When not in use the bag may be taken off, and after being dried, wrapped around the bars, which are brought together on the swivel pin, and the whole stored away in a dry place.

The dimensions of sea anchor for a deep keel boat of 30 feet waterline are: Mouth, 28 inches square; length of bag, 42 inches; opening at point, 4 inches. For larger boats add proportionately, as before.

A small strop, by which it is hauled on board, should be placed over the point opening in both styles of sea anchor. Two bridle ropes, to which the anchor mouth is fastened, must be of the same length as the bag, and should continue along and be sewn to the latter down to its point. With the

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square type they run over the corners and edges. A cork float of sufficient size to keep the anchor suspended at a depth of fifteen feet completes the outfit. All iron parts should be galvanized, and everything must be made of the best material.

Ed. Note: Nearly every yachtsman has heard of Captain Voss and his long voyages in the little canoe *Tilikum* and the yawl *Sea Queen,* although few of them know anything of the details of these adventuresome trips. In 1912 Captain Voss published an account of these voyages in a book, entitled VENTURESOME VOYAGES OF CAPTAIN VOSS. It was printed in Japan, but it had almost no circulation in this country. In an appendix to this work were some observations made by Captain Voss on the handling of small vessels at sea in heavy weather, and as his observations were the result of actual experience and not theory, what he says on the subject is of particular interest to yachtsmen, particularly by reason of the ocean voyages and races that are growing to be quite common. We are, therefore, publishing herewith the appendix of this book with no other apologies.

Gulfweed

(*Continued from page* 105)

too far. Leave not less than ½ inch at the very least. Fasten planks to chine with galvanized screws spaced about 8 inches.

Skipjacks are often built with a lap seam and a small nailing strip reinforcing the side plank, as shown in one of the sketches. This construction is very good for a flat-bottomed boat, and fair for a skipjack with very shallow angle of V-bottom, particularly if the chine runs to bottom of stem instead of half-way up. It is supposed to be an easy method. But I think it makes more work than it saves where the lap seam must change to a butt seam forward, with corresponding change in shape of nailing strip. Another "easy" way is to omit all chine log or nailing strip and back the seam by butt blocks fitted in the angle of the planks between each frame. But fitting 50 blocks of varying angle and twist by cut and trial is a weary job. My experience in building my own boats has convinced me that most of the "easy" ways were invented by the man who sailed around Cape Horn to save the trouble of locking through the Panama Canal.

(*To be continued*)

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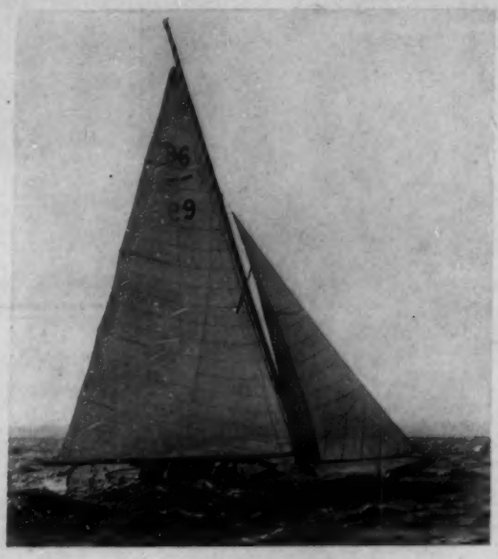

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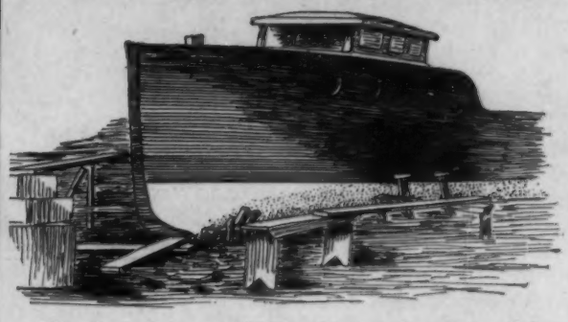

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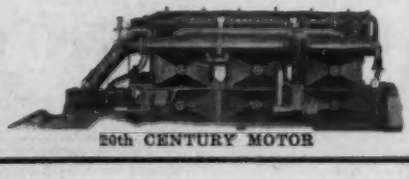

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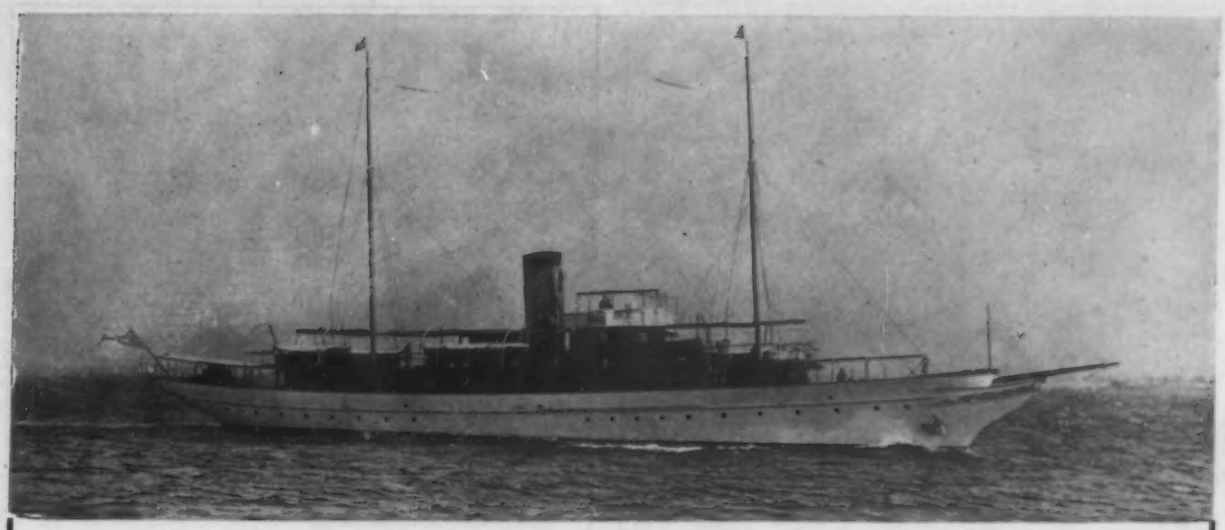

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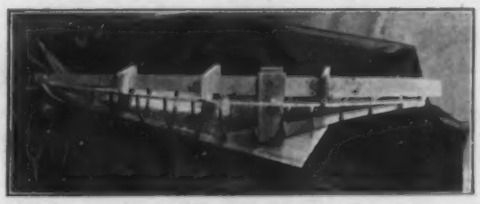

MODEL TRAWLER, TUGBOAT, etc., 4 ft. overall. Set of parts and plans similar to above. Price **32/6,** carriage paid.

12-METRE MODEL. L.O.A., 63 in.; L.W.L., 41 in.; Beam, 12.5 in.; Draught, 8.15 in. Set of parts to construct this Model, with all brass screws, copper pins, and set of construction and sail plans. All parts cut from best selected mahogany. Price **47/6** net, carriage paid.

6-METRE MODEL (2 in. to 1 ft.). L.O.A., 64 in.; Beam, 13 in.; L.W.L., 41 in.; Draught, 10 in. Set of parts and plans obtainable. Price **52/6** net, carriage paid.

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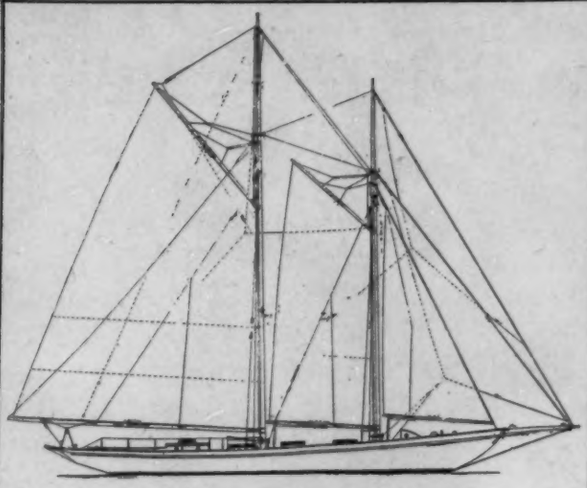

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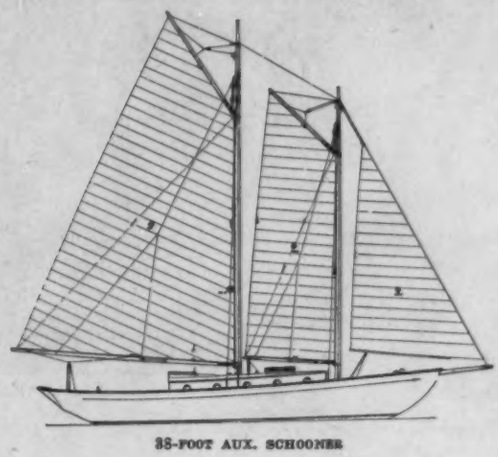

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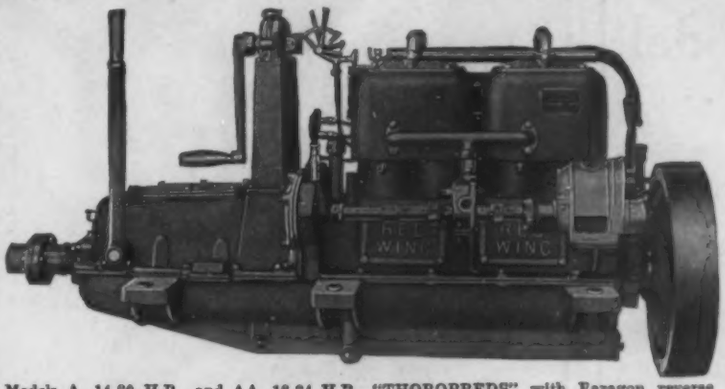

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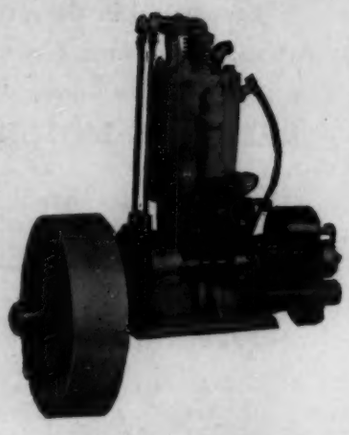

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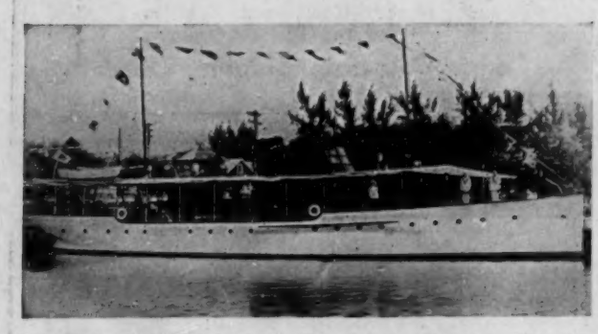

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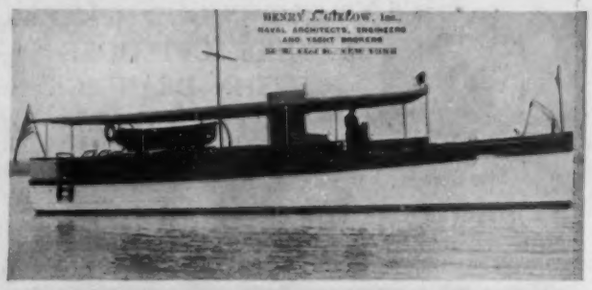

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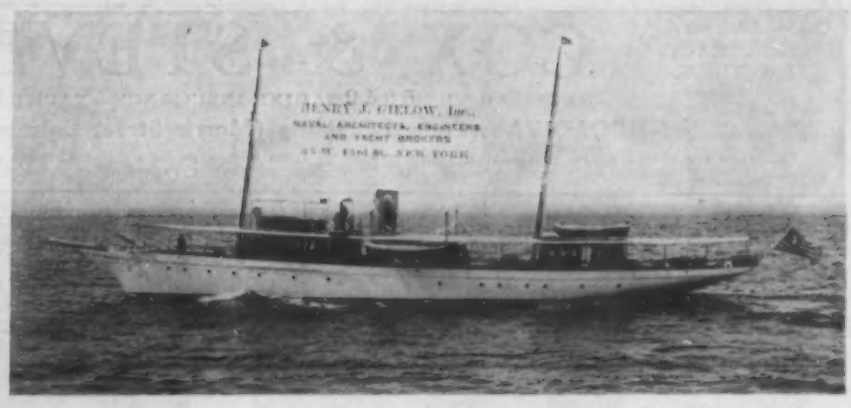

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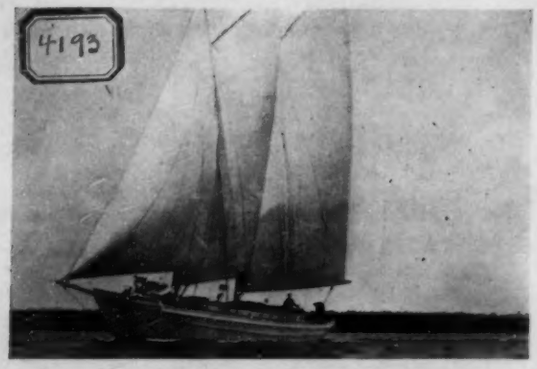

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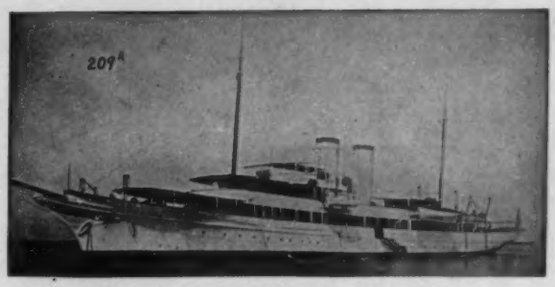

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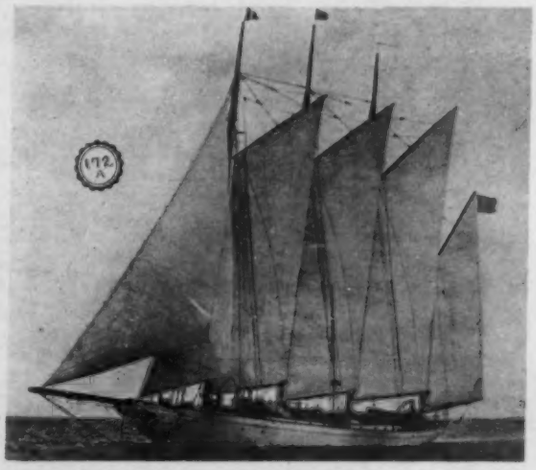

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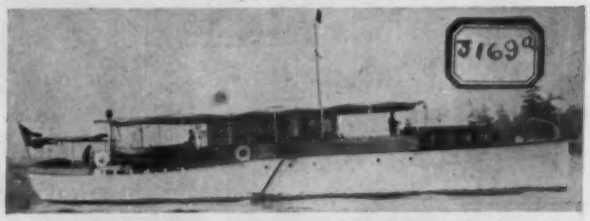

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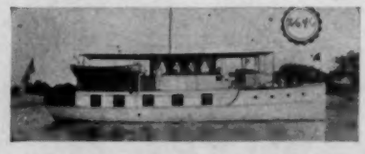

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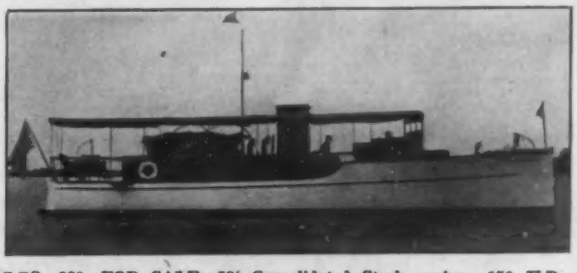
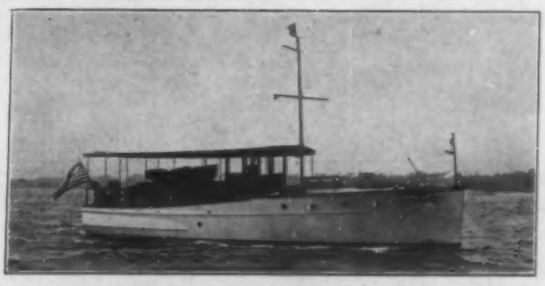
NO. 620—FOR SALE—Shoal draft auxiliary schooner, 46' 7" x 32' 6" x 12' x 2' 8". Double and single berth in main cabin. Single stateroom. Sterling engine. The finest small shoal draft schooner on the market. Roger M. Haddock, 50 East 42nd St., New York City.

NO. 7090—FOR SALE—Keel sloop, 53' 10" x 34' 9" x 11' x 7' 8". Designed by George Owen. Sleeping accommodations for 4. In excellent condition. Roger M. Haddock, 50 East 42nd St., New York City.

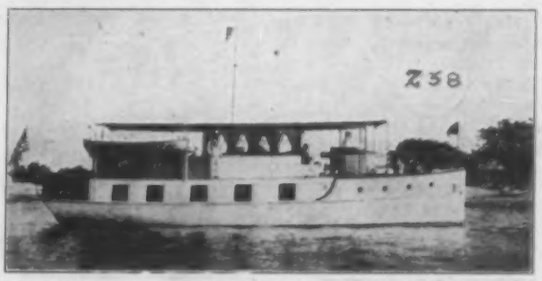


NO. 383—FOR SALE—52' Consolidated Stock cruiser, 150 H.P. Speedway motor. The best 52' now on the market. For further particulars apply R. M. Haddock, Naval Architect and Broker, 50 East 42nd St., New York City.

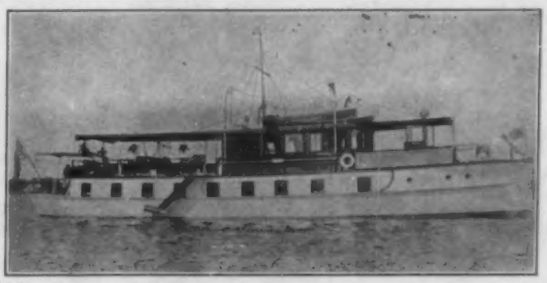
NO. 3096—FOR SALE OR CHARTER—60' Power cruiser with excellent accommodations. Sterling motor. For further particulars apply R. M. Haddock, Naval Architect and Broker, 50 East 42nd St., New York City.



NO. 4161—FOR SALE OR CHARTER—Now in Florida waters. A 1923 Elco 45' cruiser. Speed up to 12 M.P.H. Will accommodate 6 or 8 very nicely. For further particulars apply R. M. Haddock, Naval Architect and Broker, 50 East 42nd St., New York City.

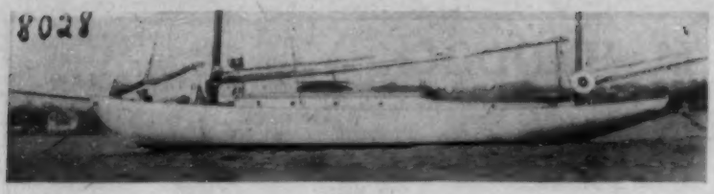


NO. 238—FOR SALE—Mathis 52' houseboat, Standard Motor, speed 10-11 M.P.H. One double, 1 single stateroom; large saloon below. Roomy deck house. For further particulars apply R. M. Haddock, Naval Architect and Broker, 50 East 42nd St., New York City.



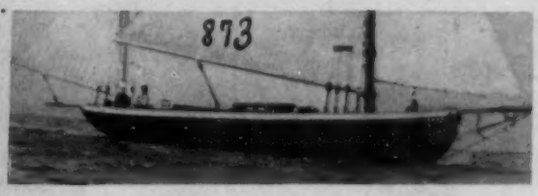
NO. 225—FOR SALE OR CHARTER—Mathis designed and built houseboat, 80 ft. by 18 ft. by 3 ft. draft. Two Standard motors; speed 11.5 M.P.H. Excellent accommodations. R. M. Haddock, 50 East 42nd St., New York City.

NO. 260—FOR SALE—32' houseboat, Speedway Motor, speed about 9 M.P.H. Price very reasonable for quick sale. Located New York City. For further particulars apply R. M. Haddock, Naval Architect and Broker, 50 East 42nd St., New York City.



NO. 8028 (left)—FOR SALE—Auxiliary yawl, 50' x 37' x 14' 2" x 5' 6". Sleeping accommodations for 6. New sails 1922. Fully found and in excellent condition. For further details consult R. M. Haddock, 50 East 42nd St., New York City.

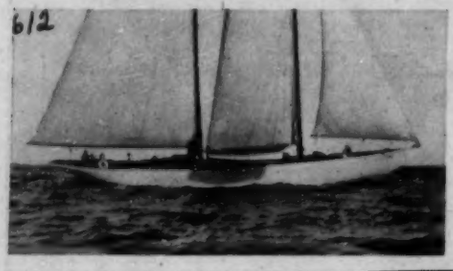
NO. 7140—FOR SALE—Auxiliary sloop, 24' x 20' x 7' 6" x 4' 4". Built 1922. A very fine single hander, very substantially built. A chance to buy practically a new boat very cheap. For further details consult R. M. Haddock, 50 East 42nd Street, New York City.



NO. 873—FOR SALE—Heavily built auxiliary cruising yawl, 36' x 30' x 11' 8" x 4' 8". Sleeps 6. A fine boat for anybody willing to sacrifice speed for solid comfort. For further details consult R. M. Haddock, 50 East 42nd Street, New York City.

NO. 7102—We have seven of the popular Star boats for sale at reasonable prices. List on request. R. M. Haddock, 50 E. 42nd Street, New York City.

NO. 7120 (right)—FOR SALE—Keel sloop 29' x 19' x 6' 6" x 4' 10". Watertight cockpit and small cuddy forward large enough for a couple of youngsters to bunk. For further details consult R. M. Haddock, 50 East 42nd Street, New York City.



NO. 612 (left)—FOR SALE—Auxiliary schooner, 60' x 40' x 12' 6" x 8' 6". Large main cabin and double stateroom. Murray & Tregurtha motor. This is an excellent all around cruising boat. For further details consult R. M. Haddock, 50 East 42nd Street, New York City.

NO. 7057—Lawley built sloop, 30' 7" x 20' 7" x 7' 10" x 5'. Two berths in cabin. Completely equipped. One of many small sloops we are offering for sale. R. M. Haddock, 50 East 42nd Street, New York City.

NO. 7133 (right)—FOR SALE—Herreshoff knockabout, 32' x 25' x 9' x 3'. Built in 1914. Two suits of sails, hollow spars, etc. The best boat ever built for day sailing. Cockpit is unusually large and comfortable. Cuddy cabin large enough for two berths. Don't consider any boat for day use until you have seen this one. For further particulars apply R. M. Haddock, 50 East 42nd Street, New York City.

NO. 7025—Herreshoff sloop, 58' x 40' x 12' 9" x 8'. Sleeps 6 in owner's party, with 2 pipe berths forward. A smart sailer. For further particulars consult R. M. Haddock, 50 East 42nd St., New York City.

NO. 633 (left)—Moderate draft Lawley schooner, 77' x 54' x 17' x 7'. Double and single staterooms. Main saloon 10' x 8'. Finished in mahogany. Auxiliary power could be installed at very small expense. Price and location from R. M. Haddock, 50 East 42nd St., New York City.

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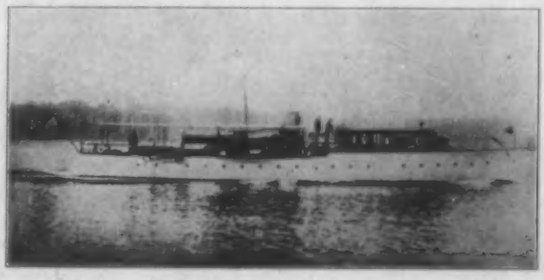
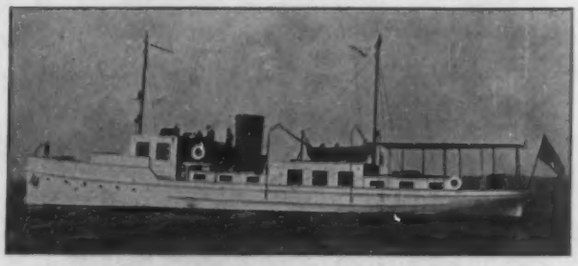
NO. 782—(right) FOR SALE—New York Yacht Club Forty Footer at a bargain price for quick sale. Price and location from R. M. HADDOCK, 50 East 42nd St., New York City.

NO. 852—(left) FOR SALE—Auxiliary keel yawl 35' waterline. Four berths in main cabin. Single stateroom. New Frisbie engine, 1922. Also new sails, 1922. Excellent condition. Price attractive. Roger M. Haddock, 50 East 42nd Street, New York City.

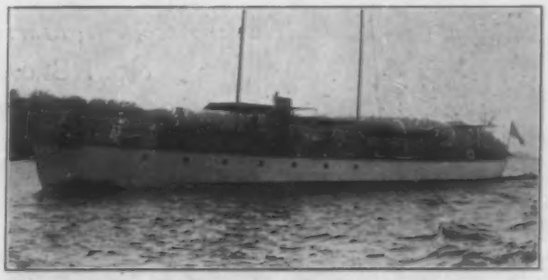
NO. 3026—FOR SALE—93' twin screw power yacht. Three double and one single staterooms. Can accommodate eight persons in owner's party. Speedway Motors. Speed 12 M.P.H. A very desirable yacht. For further particulars apply R. M. Haddock, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



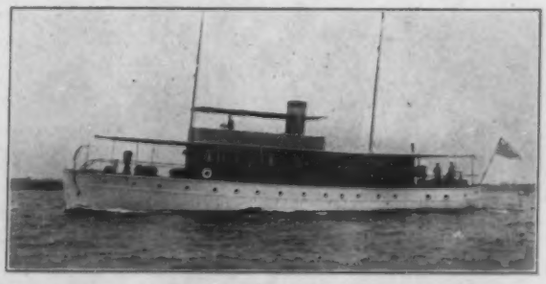
NO. 358—FOR SALE at a Bargain Figure—Twin screw motor yacht, 98' x 15' x 4' 6" draft. Two 125 H.P. Standard motors. Excellent accommodations. Can be seen near Providence. Owner anxious to sell. For further particulars apply R. M. Haddock, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.



NO. 3017—FOR SALE—77' Diesel power yacht. Two double staterooms and saloon. Hot water heating plant. Cheaper to operate than gas yacht same size. Cruising radius 1,600 miles at 10 knots. For further particulars apply R. M. Haddock, Naval Architect and Broker, 50 East 42nd Street, New York City.



NO. 3170—FOR SALE at a Bargain Figure—Twin Screw cruising power yacht. 95' x 14' x 4' draft. Powered with two Standard motors. Can accommodate seven to eight persons. Located near New York City. For further particulars apply to R. M. Haddock, Naval Architect and Yacht Broker, 50 East 42nd St., New York City.



NO. 399—FOR SALE at a Bargain Figure—Twin screw power yacht. 89' x 16' x 6' draft. Two 80 H.P. Winton motors. Excellent accommodations. Located in New York City. For further particulars apply R. M. Haddock, Naval Architect and Yacht Broker, 50 East 42nd Street, New York City.

NO. 315—FOR SALE—May charter 80' Lawley built cruiser, 125 H.P. Standard motor. Speed 14 M.P.H. Two double staterooms and saloon below. Deck dining saloon. For further particulars apply R. M. Haddock, Naval Architect and Broker, 50 East 42nd Street, New York City.

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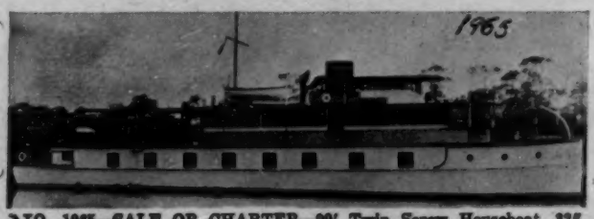
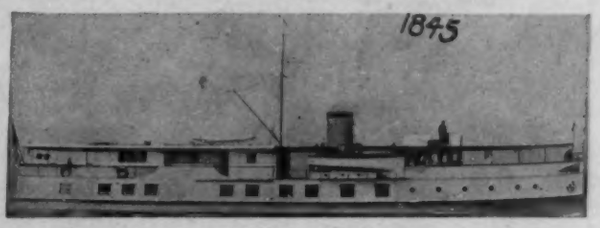
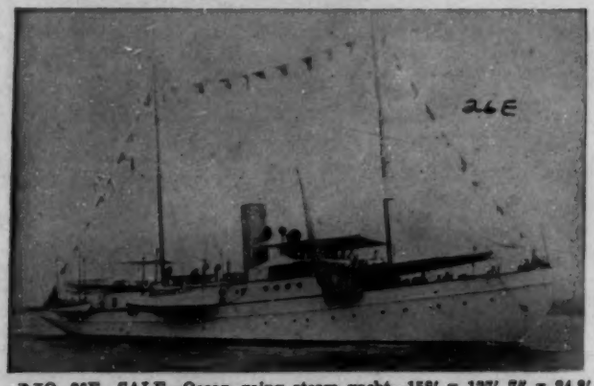


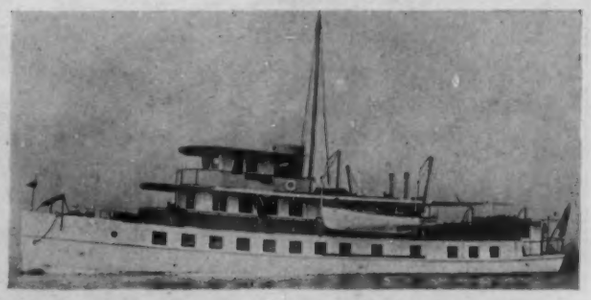
NO. 1965—SALE OR CHARTER—99' Twin Screw Houseboat, 32" draft, built 1922; commodious accommodations; Standard motor; located in Florida waters.



NO. 1845—SALE—In commission in Florida waters. Modern Triple Screw Houseboat—120' 9" x 21' x 3' draft. Designed by Tams & King and built in 1926—3 Meits & Weiss oil engines—6 staterooms, 4 bathrooms, dining saloon, deck sitting room, etc. Further particulars from Tams & King, 52 Pine St., New York.



NO. 26E—SALE—Ocean going steam yacht—158' x 127' 7" x 24.8' x 12' 9" draft. Built 1913. Commodious owner's accommodations—Completely and thoroughly overhauled, refitted and refurnished under our supervision in Fall 1920. Further particulars, Tams & King, 52 Pine St., New York.



NO. 1941—SALE OR CHARTER—Desirable 100' houseboat; two 125 H.P. Winton motors; 6 staterooms, 3 bathrooms, dining saloon, etc.

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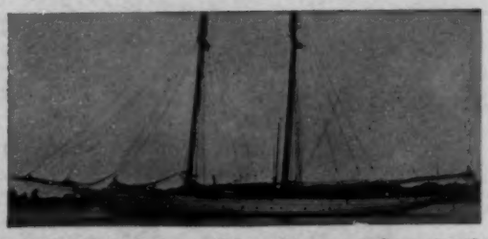
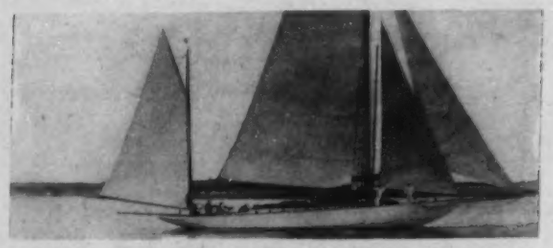


NO. 1796—Flush deck, auxiliary schooner, steel construction, fitted for offshore cruising; 148' x 27' 9" x 13' 7"; compound engine, large saloon, four staterooms, two bathrooms, etc. Write for particulars.



NO. 1643—Very desirable auxiliary yawl, 65' x 45' x 15' x 9'; new 6 cylinder Sterling motor installed 1919; Ratsey & Lapthorn sails, power tender, etc.

NO. 2054—FOR SALE—Comfortable 62-ft. cruiser, 4 cylinder Murray & Tregurtha motor; speed 12 miles. Sleeping accommodations for six persons in owner's party.

NO. 2353—Cruiser, 50' x 11'; express type, two cabins, toilet room, galley, etc. New 8-cylinder, 200 h.p. Van Blerck motor installed 1920; speed 14 to 16 miles; A-1 condition.

NO. 2542—Twin screw express cruiser, 55' x 11'; two 8-cylinder Sterling motors; enclosed bridge deck; speed 25 knots. Owner's double stateroom, main saloon, etc. In first-class condition.

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NO. 603—FOR SALE—Schooner "Lloyd W. Berry." Dimensions, 60′ x 47′ x 14′ 11″ x 8′ 6″. Accommodations: main cabin with 4 berths, toilet room, large double stateroom, forecastle with 2 berths, galley in main cabin, also stove forward. This schooner is too well known to need a detailed description. She was built in 1921 on fisherman lines of oak, fastened with treenails. She is coppered, and has suitable and full equipment for foreign cruising. There is no power in the vessel, her launch being used for towing purposes. Sails new this year. Plainly finished inside and out. Requires a minimum amount of up-keep. In her cruises to England, the Mediterranean, West Indies, etc., she has proven the ablest and most comfortable yacht of her size afloat. See April, May, June and July, 1923, Yachting. Apply John G. Alden, 148 State St., Boston.

NO. 637—FOR SALE at reasonable price—Comfortable Herreshoff auxiliary ketch, 72′ x 56′ x 12′ x 8′ 9″. Two double and captain's staterooms. Main saloon, very large galley and forecastle. Flush deck; outside lead ballast. New Scripps engine and Delco lighting plant. Sail plan very moderate on account of narrow beam. Easily maintained with two or three paid hands. Apply John G. Alden, 148 State St., Boston.

NO. 47—FOR SALE—Able auxiliary ketch, 45′ x 34′ x 11′ 4″ x 6′ 6″. Designed by John G. Alden especially for cruising on Labrador Coast, and very heavily constructed by Adams in 1914. Two cabins with two berths each. New Sterling engine, speed 8 miles. A-1 condition. Apply John G. Alden, 148 State St., Boston.

NO. 1319—FOR SALE—Lawley built auxiliary yawl, 56′ x 35′ x 13′ x 6′ 6″. Outside lead ballast. Separate engine room. Large main cabin. Standard engine; speed under power 6 knots. Always well kept up. In excellent condition. Apply John G. Alden, 148 State St., Boston.

NO. 162-11 — FOR SALE—Alden designed schooner of Malabar type, 41′ 6″ x 32′ x 11′ 3″ x 6′ 2″; full headroom; single stateroom; main cabin; passageway berth, large galley, forecastle, toilet room; very able and smart under sail; the most desirable type for off shore cruising or ocean racing. Apply to John G. Alden, 148 State Street, Boston, Mass.

WANTED SLOOP or YAWL, approximately 32′ overall, 22′ waterline, 8′ beam. Cabin large enough to bunk two or three. With or without power. State lowest cash price, designer, when and by whom built, present condition and where it can be inspected. Will return photos. Box 197, c/o YACHTING, Inc., 25 W. 43d St., New York, N. Y.

FOR SALE: Power tender, 12′ 6″ long. 7 H.P. Jaeger Engine, lapstreak cedar planking, copper riveted, towing post for towing yacht, very able and powerful, easy to tow.

Also storm trisail, hoist 23′ 6″, foot 25′, leech 35′, new, made of 8 oz. Lowell duck.

Power tender would cost today $1,500 new; trisail, $100. Make your offers c/o A. B. C., YACHTING, Inc., 25 W. 43d St., New York, N. Y.

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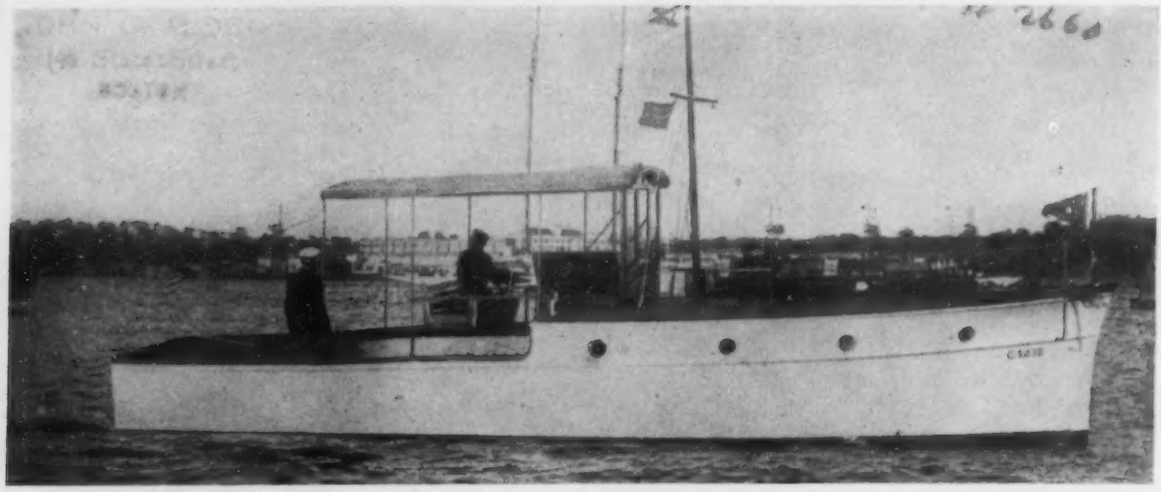

NO. 2660—FOR SALE—Semi-day cruiser, 36′ x 9′ 6″ x 2′ 8″; built 1923; new engine 1924; large, airy main cabin with two berths; full headroom; toilet room and galley; engine under bridge deck accessible from all sides; protected bridge and very large cockpit. Apply John G. Alden, 148 State Street, Boston.

NO. 173—FOR SALE—Able power boat, 49′ x 12′ x 3′ 6″, suitable for use as ferry in connection with a Summer home, or for cruising. Able and practical to run in all kinds of weather. Built in 1922. Plainly finished. Main cabin with two berths; two additional berths and galley forward. Large engine room. Pilot house and cockpit. Speed 9 miles. Apply John G. Alden, 148 State St., Boston.

NO. 1277—FOR SALE—32′ raised deck cruiser; sleeps 4; Red Wing engine 1923; speed 9 miles; large cockpit; excellent condition throughout. Apply John G. Alden, 148 State Street, Boston.

NO. 2690—FOR SALE—English built cruising auxiliary schooner, 69′ x 50′ x 14′ 8″ x 8′ 6″; teak planking, bulwarks and deck fittings; copper fastened and copper bottomed; ballast outside lead; 1 double and 3 single staterooms; main saloon; excellent equipment; at present in England, could be delivered in U. S. in early Spring. Apply to John G. Alden, 148 State Street, Boston.

NO. 751—Auxiliary yawl, delivered new late 1923. 31′ 11″ (no tax) x 23′ 6″ x 8′ 6″ x 5′. Smart and able boat of best construction and handsome finish. Engine aft of watertight bulkhead. A complete highgrade small cruiser. Will be delivered "as is" or in full commission. Apply John G. Alden, 148 State Street, Boston, Mass.

NO. 1525—FOR SALE—Shoal draught auxiliary cruising yawl, 45′ x 34′ x 13′ x 4′. Combination keel and centerboard, very comfortable and able. Two berths in main cabin, two single staterooms, two berths, toilet room and galley forward. Four cycle engine under cockpit recently thoroughly overhauled in every department and in excellent condition. Apply John G. Alden, 148 State St., Boston, Mass.

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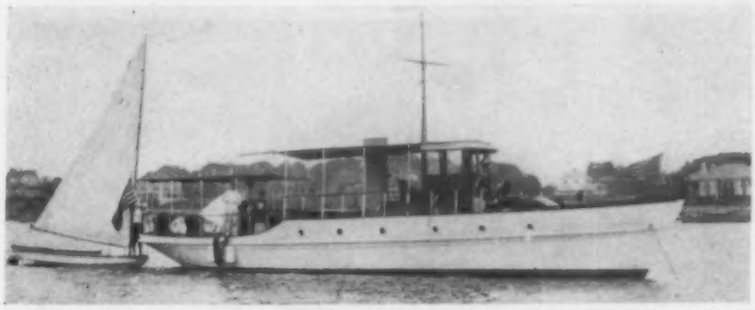

NO. 1775—FOR SALE—Unusually able and comfortable power cruiser 59′ 6″ overall, 11′ 7″ beam, 4′ 6″ draft; very heavily built of the best of stock; raised deck, semi-enclosed bridge, roomy flush after deck; owner's quarters all aft of bulkhead, consisting of large galley full width of boat; roomy main cabin with two folding berths and two transoms; toilet room to port, companionway to starboard; double stateroom aft; crew's quarters with toilet and sink forward; Standard engine; lighting plant; speed 11 miles; copper water and gasoline tanks; awnings for bridge aft; very well equipped; extensive alterations were made in summer of 1922, boat being refinished inside and out and practically refurnished; comfortable in a seaway; desirable for extended cruising on account of her staunch construction and for day use because of unusual deck space; can be maintained with one paid hand. Apply to John G. Alden, 148 State Street, Boston, Mass.

NO. 907—FOR SALE—Auxiliary keel yawl 49′ x 35′ x 13′ 5″ x 7′; heavy construction and of excellent design; outside lead ballast, copper tanks; forecastle, galley (Shipmate stove), toilet room; good single stateroom with toilet and lavatory; main cabin with three berths, full headroom; Bridgeport engine in A-1 condition—very little used; Feathering propeller; speed under power 6 miles; toilets, steering gear, tanks, etc., new two years ago; standing rigging new last year; well equipped; has been used as owner's summer home for several years; very desirable and comfortable cruiser and unusually good looking. Apply to John G. Alden, 148 State Street, Boston, Mass.

NO. 2205—FOR SALE—Herreshoff yawl, keel and centerboard; 46′ 6″ x 30′ x 10′ 10″ and 5′ 4″; double planked, copper fastened; outside lead ballast; four berths in cabin; toilet room; galley; one berth forward; well kept up and equipped. Apply to John G. Alden, 148 State Street, Boston, Mass.

NO. 2178—FOR SALE—Auxiliary keel yawl 58′ x 39′ x 12′ 8″ x 9′; built by Lawley; single and double stateroom; main cabin; two toilets, Sterling engine; speed under power 6½ miles; well equipped and in excellent condition throughout. Apply to John G. Alden, 148 State Street, Boston, Mass.

NO. 46—FOR SALE—Very fast moderate draft sloop, designed by J. G. Alden, built 1914 by Lawley. 40′ x 26′ x 10′ 3″ x 4′ 6″. Keel and centerboard. Constructed of selected stock; sails Lowell duck. Two long transoms in cabin, toilet room, forecastle, etc. Interior finish butternut. Has made short seasons; as perfect condition as a boat can be kept. Apply to John G. Alden, 148 State St., Boston.

NO. 1266—FOR SALE—Auxiliary keel sloop 41′ x 26′ x 10′ x 6′ 3″; double planked; outside lead ballast; 6 H.P. Lathrop engine; Marconi rig; Ratsey sails; forecastle large enough for two pipe berths, toilet room, galley, main cabin with two extension transoms; Marconi rig put on two years ago makes much easier to handle and faster. John G. Alden, 148 State Street, Boston, Mass.

NO. 2172—FOR SALE—Shoal draft auxiliary yawl 63′ x 45′ x 15′ 6″ x 4′; main saloon; two staterooms; two owner's toilets; large galley; new Scripps engine; high grade boat in excellent condition throughout. Apply John G. Alden, 148 State St., Boston, Mass.

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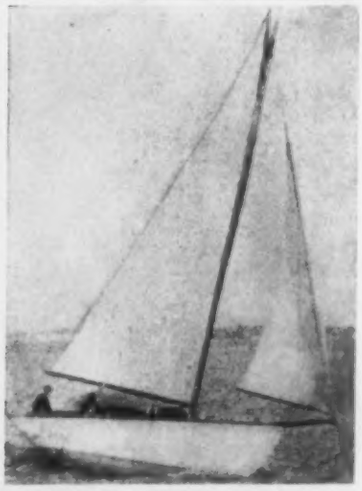
NO. 2129—Able keel cruising knockabout, built by Lawley, 40′ x 25′ x 9′ 6″ x 6′; one of the most desirable of the 25-footers; sleeps two aft, one forward; toilet room, galley, dressers, clothes lockers, etc. Construction A-1; has had the best of care; new deck, sails and standing rigging; fully equipped including 10′ tender; cedar and mahogany sailing dinghy in A-1 condition included if desired. Apply to John G. Alden, 148 State Street, Boston, Mass.

NO. 2630—FOR SALE—Herreshoff Class "S" knockabout; 28½′ x 20½′ x 7′ 3″ x 4′ 6″; self-bailing cockpit; has best racing record of any "S" boat; very desirable, not only because of the keen racing in this class, but also as an unusually fast and able afternoon sailer. Apply to John G. Alden, 148 State Street, Boston, Mass.

NO. 1626—FOR SALE—One of the most attractive auxiliary schooners ever built; 66′ x 46′ x 14′ x 9′ 2″; built 1917; one single, one double stateroom; main cabin; large galley; outside lead ballast; pole masts, long keel; smart under sail and easily handled; in A-1 condition. Apply to John G. Alden, 148 State Street, Boston, Mass.

NO. 2504—Lawley built auxiliary yawl 38′ x 23′ x 9′ x 5′. Outside lead ballast; hard pine planking; two berths in cabin, room for one forward; full headroom in cabin; four cycle Palmer gives speed of 5½ miles under power alone; new cushions, toilet, propeller and shaft, 1923; sails and rigging 1922; well found, including tender; easily handled by one man. Apply to John G. Alden, 148 State Street, Boston, Mass.

NO. 696—Keel 21-footer knockabout. Well built and good model; dimensions 32′ x 21′ x 8′ 6″ x 5′ 6″; roomy self-bailing cockpit; good cabin for two persons; stove space, ice box, lockers, etc.; handy rig inboard; able and excellent sailer; sails and rigging good. Apply to John G. Alden, 148 State Street, Boston, Mass.



NO. 889—FOR SALE—Herreshoff auxiliary keel sloop, 33′ x 25′ x 9′ x 5′ 2″; the roomiest boat of her size available; double planked; outside lead ballast; narrow trunk cabin; good cockpit. A one cylinder Lathrop engine, installed late in 1923, drives boat at 5½ M.P.H.; pipe berth, toilet, ice chest, galley, etc., forward; four berths in cabin; full headroom; very able; has run from Newport to Marblehead (outside the Cape) in ordinary summer weather in 27 hours. Easily handled by one man, but has comfortable accommodations for five. Apply to John G. Alden, 148 State Street, Boston, Mass.

NO. 2662—FOR SALE—50 ft. power cruiser, beam 10′ 3″, draft 4′ 10″. One of the most attractive and best finished cruisers of this size. Main saloon, double stateroom, forecastle, bridge deck. Speed 10 miles; economical to run. Fully found. In fine condition. Apply John G. Alden, 148 State St., Boston.

NO. 2127—FOR SALE—Twin screw express cruiser in A-1 condition, 55′ x 11′ x 2′ 9″. One double stateroom; 4 berths in main cabin; two toilets; V bottom construction, copper fastened; enclosed bridge; cockpit aft; speed 20 miles. Apply to John G. Alden, 148 State Street, Boston.

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RIGG'S YACHT AGENCY

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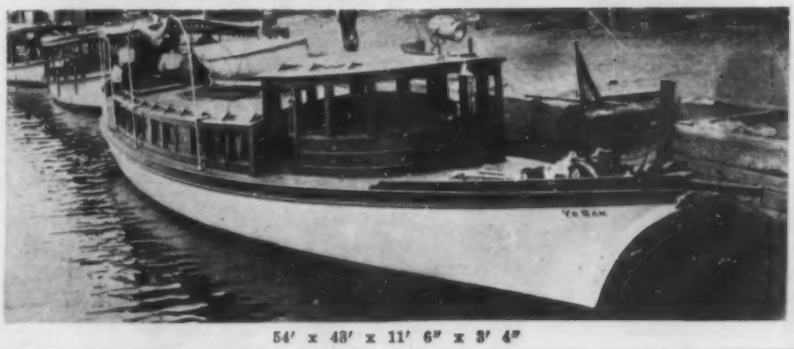
40′ x 38′ x 10′ 6″ x 3′ 3″

NO. 543—FOR SALE—A real, able, comfortable raised deck cruiser. Just the craft for the party wanting a good, dependable boat. Large triple stateroom with spring berths, main saloon with two extension transoms, toilet room and galley. Completely overhauled and refitted and furnished Spring of 1923. Palmer 24 H.P. motor one season old drives her an honest 10 M.P.H. Price $3,500. Located in New York City.

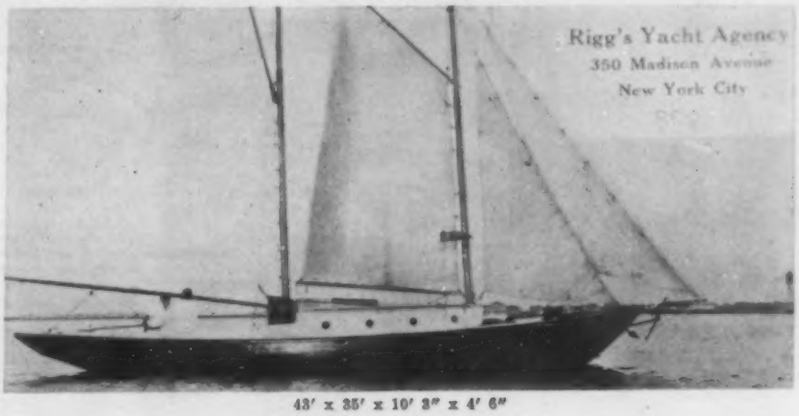
42′ x 9′ x 3′ 10″

NO. 718—FOR SALE—We have been offering this boat to every client at all interested in small bridge-deck power cruisers, but so far no one has bothered to look at her. Somebody is passing up a good bet. This little cruiser is in fine shape, is a good, comfortable boat, and can be bought at the right price. Double stateroom, main saloon, 2 toilets, large cockpit and bridge. One man control. Location Mystic, Conn.



54′ x 43′ x 11′ 6″ x 3′ 4″

NO. 1059—FOR SALE—Large, able cruising yacht; comfortable, roomy boat. Large double stateroom, main cabin and pilot house. All controls at wheel; 6 cyl. heavy Jaeger motor drives her 10 knots per hour. Boat is in fine condition and reasonably priced. Owner will consider 30 to 35′ power cruiser in part payment. Really worth looking at and serious consideration if you are interested at all in this type of craft. Located in New York City.



43′ x 35′ x 10′ 3″ x 4′ 6″

NO. 899—FOR SALE—Now what's the matter with this little fisherman type aux. schooner for $1,500.00. There is little use of making foolish offers, because the asking price is ridiculously low to start with. Hull sound and solid, motor new October, 1922, and in excellent condition. Needs new sails, which will cost about $200.00, and usual painting in Spring—that's all. Has 2 singles and one double berths, toilet room and small galley; full headroom; good light and ventilation—located near New York City. Prompt action advised.

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RIGG'S YACHT AGENCY

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Cable address
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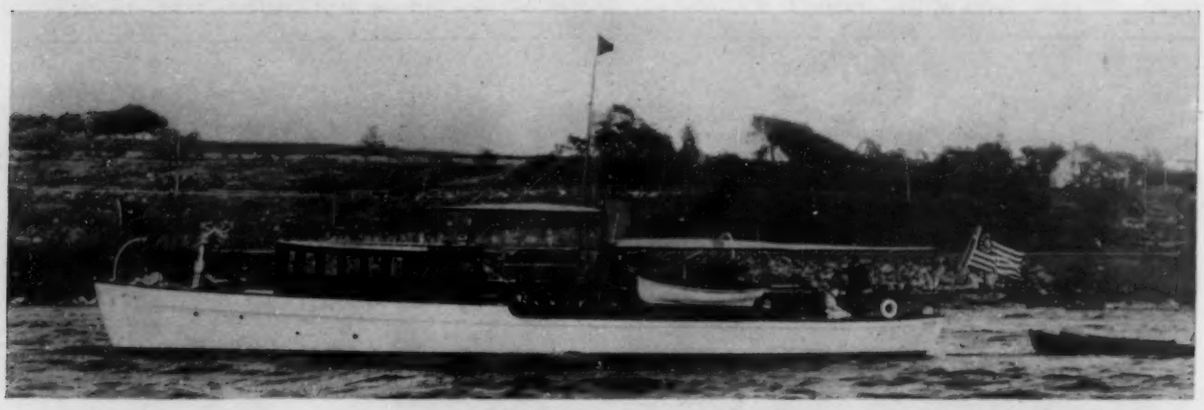
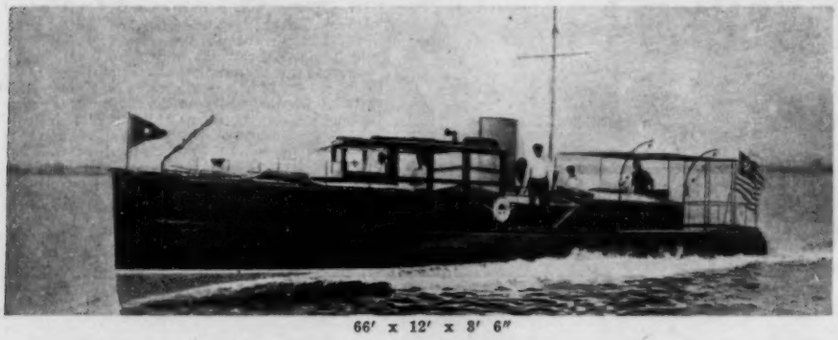
45′ x 9′ x 3′ 2″

NO. 711—FOR SALE—One of the most beautifully built day express cruisers ever turned out by the N. Y. Y. L. & Eng. Co. Has almost new 125 H.P. STERLING Motor, with starter, that drives her 18-20 M.P.H. Small cabin with two transoms and toilet room. Very large cockpit. All exterior work teak and cabin interior Honduras mahogany. Would make excellent addition to Summer estate or to use as ferry. Price $5,000.00. Offer might be considered. Inspectable near New York.



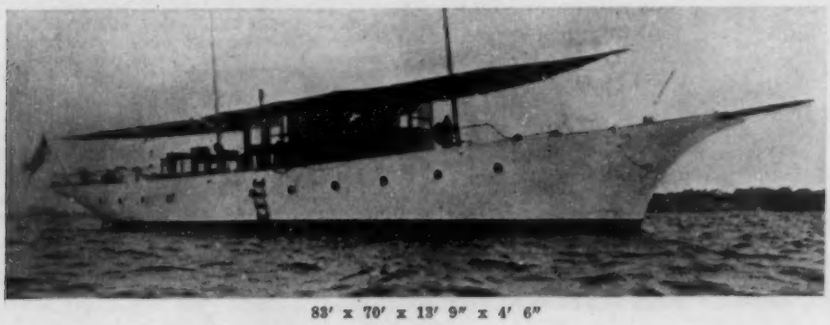
78′ 8″ x 70′ x 12′ 6″ x 4′

NO. 76—FOR SALE—Large, able, comfortable cruising power yacht. Fine owner's accommodations, including double stateroom, large main saloon, and new deckhouse. This is a Murray and Tregurtha built yacht, and has two of their 60 H.P. motors. Speed 11 knots. New owner will have an entirely reconditioned and refitted boat. Present owner anxious to sell and will accept very reasonable offer. Location near New York.



66′ x 12′ x 3′ 6″

NO. 74—FOR SALE—Twin screw mahogany express cruiser. Speed 25 M.P.H. One single stateroom with bathtub under berth, and main cabin with 2 transom berths and two Pullmans. Large deck saloon with 2 large transoms. Power 2 200 H.P. 8 cyl. Sterlings. Outfit of the highest type and in A-1 shape. This yacht is not a bargain, but, like all fine things, has a definite value. No bootleggers need apply.



83′ x 70′ x 13′ 9″ x 4′ 6″

NO. 72—FOR SOME ONE a Summer home afloat. This fine old Herreshoff steam yacht without power. Has two double and one single staterooms, 4 berths in main cabin, bath and two toilets. Was built by Herreshoff for his own use and has always been under his care. Used only 10 seasons. Has bed for gasolene motor of about 60-70 H.P. if new owner cares to move about. Lots of equipment, including tender and power launch with new motor. Owner cannot use and is very anxious to sell. Will consider first call 30′-35′ power cruiser in part payment or low cash offer. Here's a chance, you small boat owners.

Telephone
Vanderbilt 0596

RIGG'S YACHT AGENCY

350 Madison Ave. (at 45th St.), NEW YORK

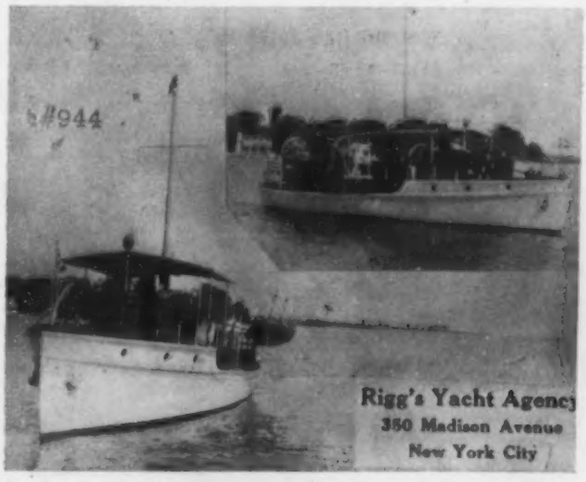
Cable address
"Rigging"

60′ x 40′ x 13′ 5″ x 8′ 8″

NO. 680—FOR SALE—Knockabout type aux. cruising schooner. Designed and built by Stearns & McKay in 1909. Fine heavy hull in first class condition. New 18 H.P. Murray & Tregurtha motor. Complete suit of Briggs & Beckman sails, some new. Owner's accommodations. One double stateroom and main saloon with two double and two single berths. Location Great Lakes. Price very reasonable.

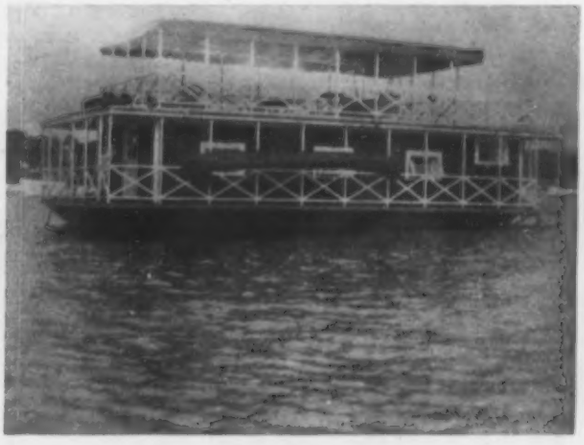
38′ 8″ x 32′ x 12′ x 4′

NO. 939—FOR SALE—New Auxiliary Power Schooner. Designed by Charles D. Mower and built in Spring 1923. Fairly good sailer and fast under power. Double stateroom, large main saloon, good galley and toilet room. Full headroom throughout. Stearns 28-50 H.P. Self-starting Motor. All controls at wheel. Owner wants large boat. Inspectable near New York City.



60′ x 54′ 6″ x 12′ 6″ x 3′ 6″

NO. 944—FOR SALE—This lovely 60′ power cruiser is being offered for sale at a very reasonable price. Was designed and built by the N. Y. Y. L. & Eng. Co. ten years ago and has one of their 65-75 H.P. engines. Owner's quarters are forward and consist of deck saloon, two double staterooms and toilet room. The deck saloon has a Pullman and extension berth. Boat is in fine condition throughout and inspectable within an hour's run from New York.



40′ x 19′ x 1′

FOR SALE—A large, comfortable, barge-type Houseboat. Just the thing to spend the Summer on. Is far better than a bungalow. Is only a year old and in excellent shape. Has wonderful amount of room for boat of its size. Large living room, two double bedrooms, bathroom and large kitchen, one end of which is used as a dining-room. Large upper deck covered with an awning. Is completely furnished with the nicest money can buy and ready for the new owner to step into. Can be inspected within an hour of New York City.

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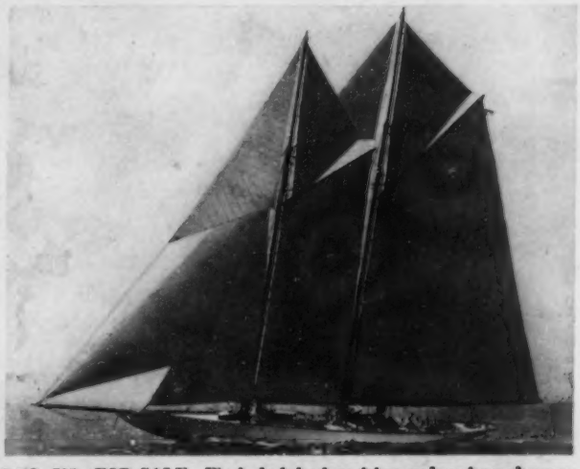
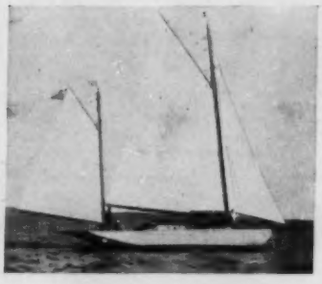
NO. 1217—FOR SALE—Auxiliary centerboard cruising schooner. 46′ 6″ x 32′ 6″ x 12′ 6″ x 3′ 10″. Sails new 1922. Sterling motor new 1921. Completely equipped. Condition excellent. FORD & PAYNE, 41 E. 42d Street, New York City.



NO. 705—FOR SALE—Flush deck keel cruising and racing schooner. 90′ x 62′ x 7′ 6″ x 11′ 4″. Built by Lawley in best manner. Two large staterooms, etc. Well equipped for cruising and racing. Two suits of sails. Two sets of spars, one hollow. FORD & PAYNE, 41 E. 42d Street, New York City.

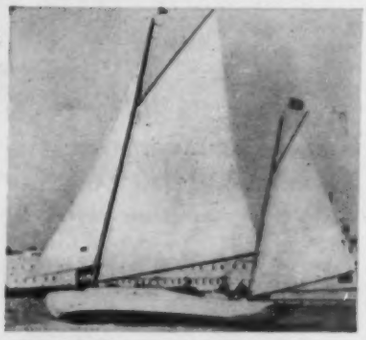
NO. 618 — FOR SALE — Keel cruising sloop. 50′ x 32′ x 11′ 6″ x 7′ 6″. Double stateroom and saloon provide berths for six. This yacht has always had best of care. Condition throughout excellent. FORD & PAYNE, 41 E. 42d Street, New York City.

NO. 1268—FOR SALE—Auxiliary keel cruising schooner. 55′ x 42′ x 14′ x 7′ 4″. Built 1922. Sterling motor. New sails 1923. Double stateroom. Prize winner in Bermuda Race, 1923. Owner building larger yacht. FORD & PAYNE, 41 East 42d Street, New York City.



NO. 1262—(left)—FOR SALE—Auxiliary keel cruising yawl. 55′ x 36′ x 14′ x 8′. Stateroom and large saloon. Berths for seven. Sails new 1922. Standard motor. Complete and in A1 condition. Owner has larger yacht. FORD & PAYNE, 41 E. 42d Street, New York City.

NO. 1159—(right)—FOR SALE—Auxiliary keel and centerboard cruising yawl. 42′ x 28′ x 12′ 4″ x 4′. Stateroom, saloon and large galley. Kermath motor completely overhauled in fall of 1923. FORD & PAYNE, 41 E. 42nd Street, New York City.



NO. 2100—FOR SALE—Raised deck cruiser. 63′ x 58′ x 13′ 10″ x 4′. Speedway motor new 1922. One double and one single stateroom, bath, large galley, etc. Unusual value. FORD & PAYNE, 41 E. 42nd Street, New York City.

NO. 2687—FOR SALE—Bridge deck cruiser. 45′ x 41′ x 11′ x 3′ 6″. Double stateroom and saloon. Berths for six. Unusually comfortable and able cruiser. FORD & PAYNE, 41 E. 42d Street, New York City.

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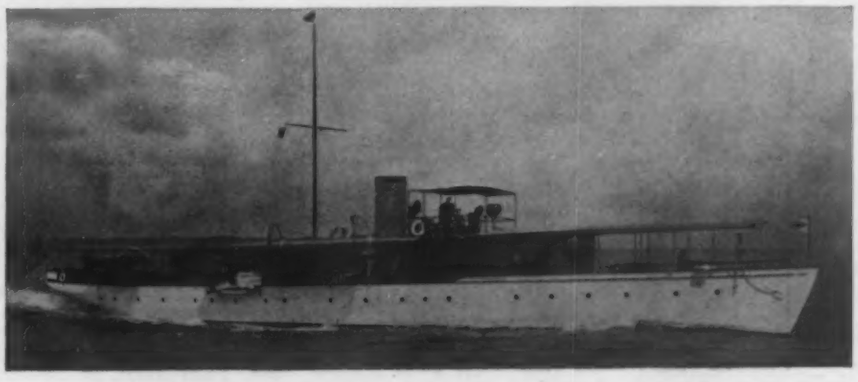
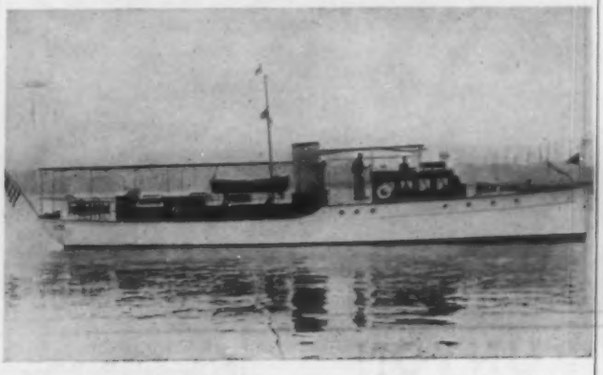
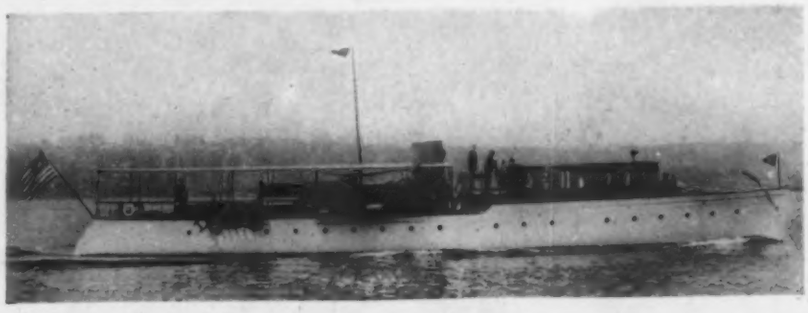


NO. 2404—FOR SALE—Twin screw steel cruising yacht. 138' x 126' x 17' x 4' 6". Standard motors. Speed up to 18 M.P.H. Four staterooms, two baths, large deck saloon, etc. Completely overhauled 1923, including new teak deck. Unusually comfortable and able yacht. FORD & PAYNE, 41 E. 42d Street, New York City.

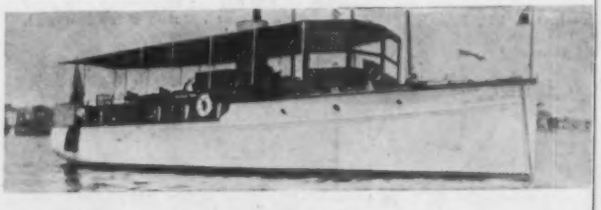


NO. 2384—FOR SALE—Twin screw cruising yacht. 72' x 66' 6" x 12' 8" x 3' 6". Winton motors. Built by Lawley. Two double staterooms, bath, large dining saloon, etc. Complete and in A1 condition. FORD & PAYNE, 41 E. 42d Street, New York City.

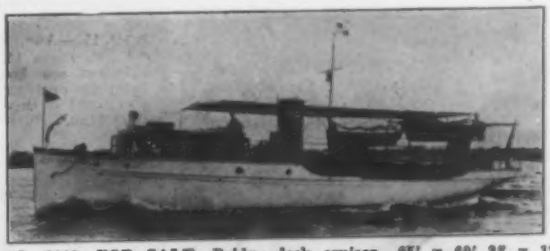
NO. 2710—FOR SALE—Bridge deck express cruiser. 40' 6" x 39' x 9' 5" x 2' 10". Built 1922 in best manner, hull double planked mahogany. Speed 15-24 M.P.H. Has had little use and best of care. Complete. FORD & PAYNE, 41 E. 42d Street, New York City.



NO. 2391—FOR SALE—Twin screw power yacht. 98' x 97' x 15' x 4' 6". Built by Lawley. Standard motors. Speed 14-16 M.P.H. Two double, one single staterooms, two baths, deck saloon, etc. Completely renovated inside and out regardless of expense. Low price. FORD & PAYNE, 41 E. 42d Street, New York City.



NO. 2414—FOR SALE—Bridge deck cruiser. 50' x 49' 10" x 10' 3" x 3' 3". Double stateroom, saloon, etc. Yacht and equipment completely overhauled 1923. Everything in A1 condition. FORD & PAYNE, 41 E. 42d Street, New York City.



NO. 2109—FOR SALE—Bridge deck cruiser 65' x 60' 3" x 13' x 3' 6" Two large staterooms, bath, saloon and deck dining saloon Engine completely overhauled 1923. Over $6,000 spent on yacht last year and she is now in tip top shape. FORD & PAYNE, 41 E. 42d Street, New York City.

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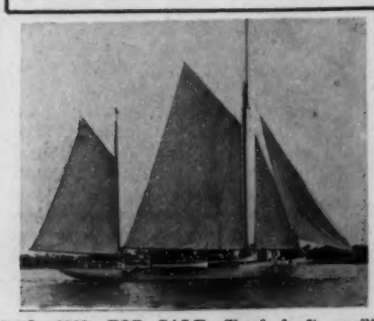
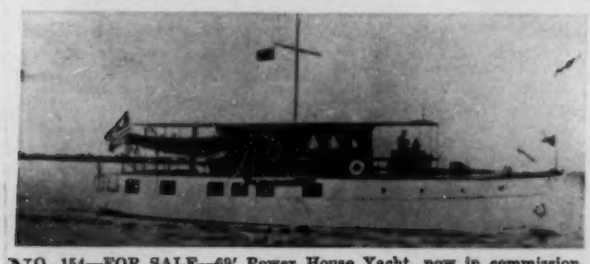


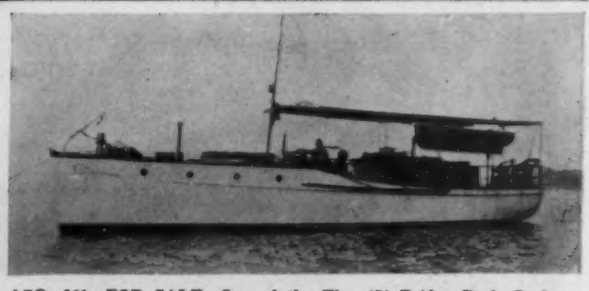
NO. 2388—FOR SALE—Shoal draft auxiliary ketch, now in Florida waters. Dimensions 83' x 72' x 22' x 3' 10". Ideal for Southern cruising. Frank Bowne Jones, Yacht Agent, 25 Broadway, New York, N. Y.

NO. 3652—FOR SALE—Famous Larchmont "O" Class sloop. Double stateroom, large main cabin, etc. Ideal for both racing and cruising. Frank Bowne Jones, Yacht Agent, 25 Broadway, New York, N. Y.

NO. 1220—FOR SALE—66' o. a. Auxiliary keel cruising schooner. Best design and build. Double and single stateroom, large saloon, etc. In excellent condition. Probably the best yacht of this type available. Frank Bowne Jones, Yacht Agent, 25 Broadway, New York, N. Y.



NO. 154—FOR SALE—69' Power House Yacht, now in commission in Florida waters. Accommodations consist of large deck saloon, dining saloon, 4 staterooms. Frank Bowne Jones, Yacht Agent, 25 Broadway, New York, N. Y.



NO. 361—FOR SALE—One of the Elco 45' Bridge Deck Cruisers, in excellent condition. Frank Bowne Jones, Yacht Agent, 25 Broadway, New York, N. Y.

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Yacht Broker Insurance

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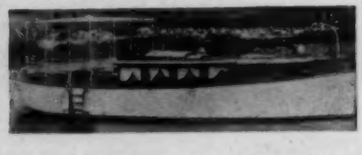
New Bedford, Mass.

NO. 146—Sloop, L.O.A. 30', L.W.L. 18', Beam 7' 6", Draught 5'. Good condition.

NO. 159—Aux. Ketch—L.O.A. 37', L.W.L. 31', Beam 10' 2", Draught 5' 6". An excellent sea boat with complete equipment for cruising. For further particulars see pages 5 through 8, January issue of YACHTING.

FOR SALE—File No. 18—Auxiliary yawl. L. O. A. 50', L. W. L. 30', beam 13' 6", draught 4' 6"; sleeping accommodations for 5 and 2 crew; one single stateroom; toilet and galley; completely equipped for cruising. Price reduced since last adv.

NO. 93—Cat Boat, L.O.A. 20', L.W.L. 18', Beam 9', Draught about 2'. Equipment for day's sailing, but could be used for cruising.



NO. 90—Cruiser, L.O.A. 32'. 40 H.P. Treebit engine. A good boat and in good shape.

FOR SALE—File No. 82—House Boat, L.O.A. 84', L.W.L. 76', Beam 23', Draught 4' 6". Sleeping accommodations for 7 people. Excellent condition. A real bargain.

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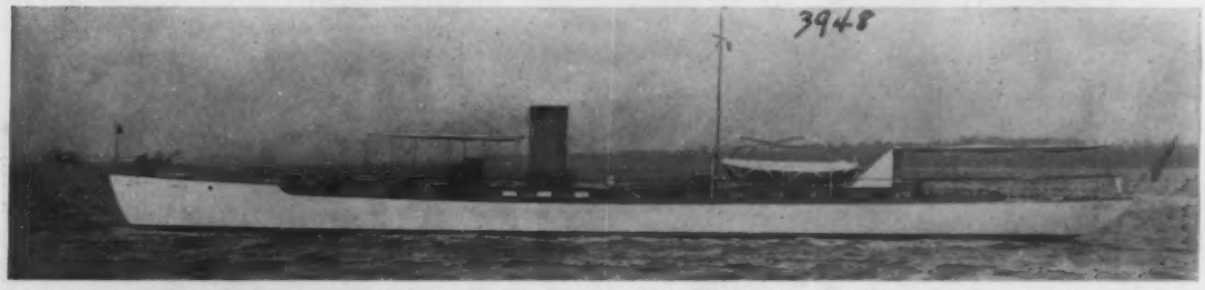
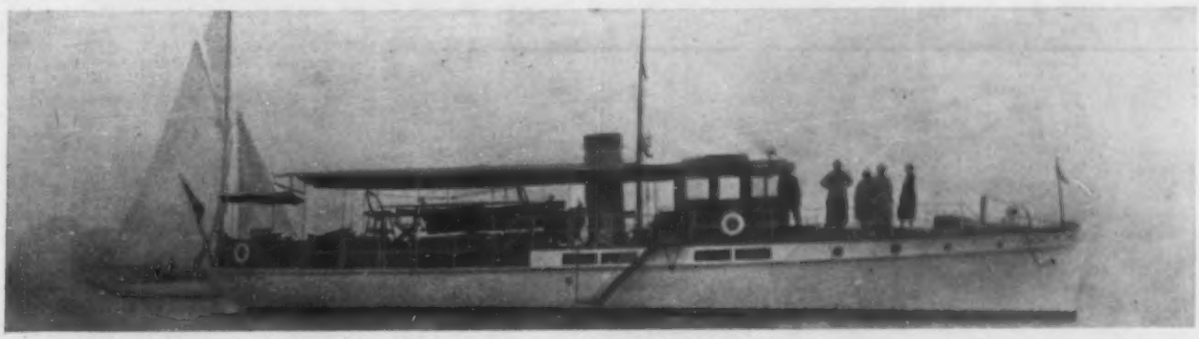


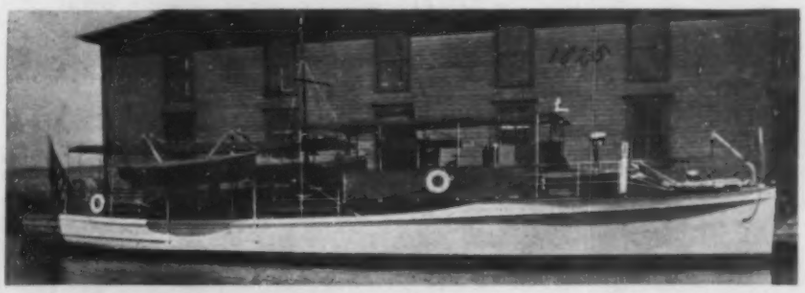
NO. 3948—FOR SALE—High Speed Twin Screw Steam Yacht. 112 ft. long. Designed and built by Herreshoff. Double stateroom; dining saloon and main saloon. Large galley, etc. Two triple Expansion Engines; Water-Tube Boiler. Electric lights. Specially adapted for fast ferry service between owner's country home and the City. Price attractive. H. H. JENNINGS COMPANY, 154 Nassau St., New York City.



NO. 1333—FOR SALE—Twin Screw Power Yacht. 70 ft. long, 14 ft. beam, 4 ft. draft. Three staterooms. Large after saloon with two Pullman berths and two transom berths. Toilet room, etc. Two 32-37 H.P. Standard Motors. Speed 12 miles. Hot water heat. Electric lights. Splendid sea boat. Price very reasonable. Was thoroughly overhauled last season at a great expense. H. H. JENNINGS COMPANY, 154 Nassau St., New York City.

NO. 3906—This most desirable Steam Yacht for sale. Never in Government service. 127 ft. Overall. Dining saloon and social hall on deck. Five staterooms. Bath. Triple Expansion Engine. Two boilers. Speed up to 17 miles. Electric plant. Steam heat, etc. Price right. H. H. JENNINGS COMPANY, 154 Nassau St., New York City.

NO. 2496—30 foot cruiser. 9 ft. 3 in. beam, 2 ft. 6 in. draft. Two berths in cabin. Self-bailing cockpit, 8 ft. x 9 ft. Four cylinder Doman motor, 25-40 H.P., installed new 1923. Speed, 10 miles. Electric lights, etc. Splendid proposition. Price very reasonable, as we sold the owner a larger yacht. H. H. JENNINGS COMPANY, 154 Nassau St., New York City.



NO. 1825—FOR SALE—Comfortable and roomy cruiser, 60 ft. long; 13 ft. beam; 3 ft. 9 in. draft. Two large staterooms; main saloon, bathroom, etc. Standard Motor. Speed 10 miles. Electric lights, etc. Roomy bridge deck and large after deck. Ideal family boat. Price attractive. H. H. JENNINGS COMPANY, 154 Nassau St., New York City.

NO. 3665—FOR SALE—Twin Screw Houseboat, 70 ft. long. Four double and one single staterooms. Large dining saloon and galley. Two bathrooms. Two 40 H.P. motors. Speed, 9 miles. Electric lights, etc. Price very attractive, as owner bought larger yacht. H. H. JENNINGS COMPANY, 154 Nassau St., New York City.

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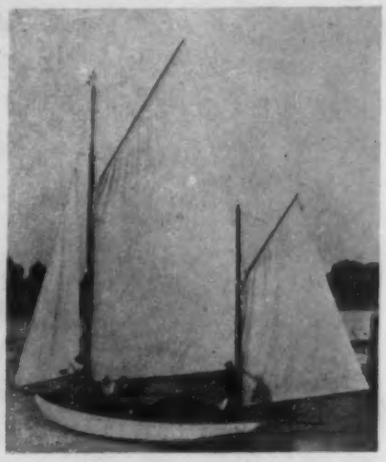
NO. 631—FOR SALE AT BARGAIN—Very seaworthy V bottom Express Cruiser. The only small boat on record to successfully navigate Long Sault Rapids on the St. Lawrence River. 40 ft. x 9½ ft. x 2½ ft. Built by Ditchburn from Hacker Design. B. C. Cedar and Mahogany planking, bottom double, on white oak frames Copper Riveted. Sleeps Six in Two Separate Cabins, finished in Solid Mahogany. Engine 200 H.P. Eight Cylinder Sterling. Guaranteed speed, 24¼ Miles per hour. Very completely equipped and furnished regardless of expense. T. B. F. Benson, 11 Leader Lane, Toronto.



NO. 513—FOR SALE—Auxiliary Yawl, 36 ft. x 29 ft. x 10½ ft. x 5½ ft. Built 1914. Oak Frames, Cypress Planking Copper Fastened. Engine 8 H.P. Kermath, new 1921. Speed under power Five Miles. Sleeps Four to Six. Double Stateroom. Very Good Condition. Further particulars from T. B. F. Benson, 11 Leader Lane, Toronto.

No. 806 — Auxiliary Yawl—61 ft. x 40 ft. x 15 ft. x 7 ft.; accommodations include large cabin for 4, stateroom, galley, 2 toilets, etc. Heavily built. Fine cruiser completely equipped. 35 H.P. Kermath 1924 motor. Frank Bowne Jones, Yacht Agent, 25 Broadway, New York, N. Y.

NO. 567—FOR SALE AT BARGAIN—Keel Sloop, 47 ft. x 30 ft. x 10 ft. x 7 ft. Designed by Mylne, Glasgow. Two Suits Ratsey Sails. Winner of Queen's, Prince of Wales' and Fisher Cups. Especially fast in light weather. New Deck and Cabin Trunk 1923. T. B. F. Benson, 11 Leader Lane, Toronto.

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NO. 525—FOR SALE—R Class Sloop, Owen Design, 35 ft. x 21¾ ft. x 5 ft. Completely overhauled 1923 and put in A-1 condition. Three Suits Ratsey Sails. Very Fast in Light Weather. Well Found for Cruising. T. B. F. Benson, 11 Leader Lane, Toronto.

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NO. 25 (right)—FOR SALE—Keel knockabout 25' x 15' x 6' 6" x 3' 9". Lead ballast. New Marconi rig. Splendid little boat. Apply to Gordon Munroe.

NO. 30 (left)—FOR SALE—One of the famous Manchester Y. C. One Design Class. 25' 10" x 17' 6" x 6' 3" x 4' 3". Excellent condition. Apply to Gordon Munroe.

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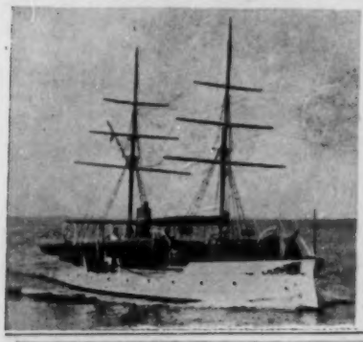
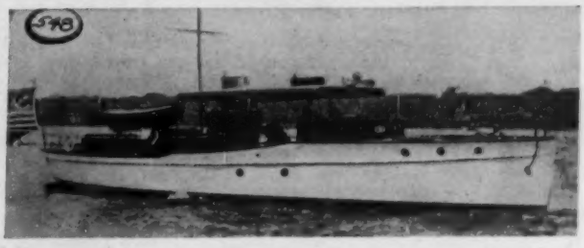
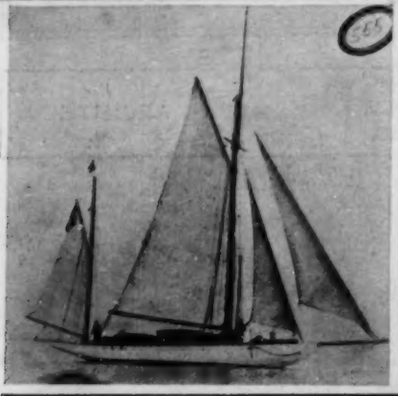
NO. 560—FOR SALE OR CHARTER—75' x 14' x 4' 6". Gasoline Cruiser, Sterling powered. Very able seaboat; excellent accommodations below and on deck. Has deck dining saloon, two large staterooms, large main saloon and bath room. Located Great Lakes. Reasonable price. Henry C. Grebe & Co., Inc., 6 N. Michigan Avenue, Chicago, Ill.



NO. 824—FOR SALE—68 foot cruising power yacht, Brigantine rigged. 13 foot six inches beam, 5 foot draft, 2 double staterooms, commodious dining saloon. 8 cylinder Sterling motor. Cruising speed 13 miles. Independent electric plant. Has received exceptional care and is in excellent condition; now on Great Lakes. Very attractive price for immediate sale. Henry C. Grebe & Co., Inc., 6 North Michigan Ave., Chicago, Ill.

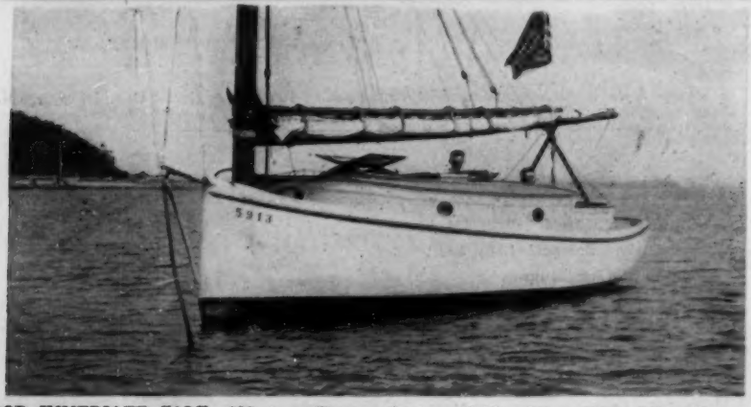


NO. 548—FOR SALE—Attractive bridge deck power cruiser. 65' x 13' x 4' 8" draft. Thoroughly modern and splendid seaboat. Bargain for immediate sale. Henry C. Grebe & Co., Inc., 6 N. Michigan Avenue, Chicago, Ill.



NO. 555—For Sale at very attractive figure. 55' o.a., 15' beam, 4' 6" draft auxiliary yawl. Designed by late A. Cary Smith. Staunchly constructed and is in best of condition. Powered with Speedway motor. Speed 7 miles. 3 single staterooms, main saloon and crew's quarters for two. Electric lights throughout. Independent lighting system, Edison storage batteries. Inventory most complete including linens, silverware, china, etc. Carries two Davis tenders, one power and one rowing, both on davits. Sails and sail covers used one season. Very easily handled and is an exceptionally good seaboat. Well adapted for cruising in any waters. Further particulars, price, etc., from Henry C. Grebe & Co., Inc., 6 N. Michigan Ave., Chicago, Ill.

NO. 1082—FOR SALE—45 ft. Hand design V-bottom cruiser. Practically new. Built of solid mahogany, natural finish. Large, partly enclosed bridge deck, double stateroom aft, four berths in main cabin, two toilets. Attractively furnished and in excellent condition. Very seaworthy. Henry C. Grebe & Co., Inc., 6 N. Michigan Ave., Chicago, Ill.



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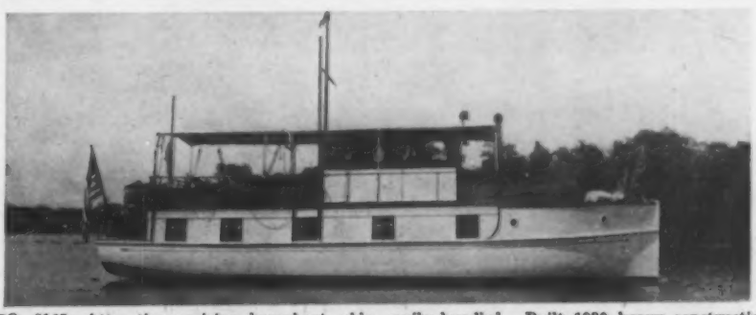
FOR SALE—No. 923—Crosby Catboat—25' x 12' x 2' 6". Sleeps 3 to 5. Lathrop Engine. Practically a new boat in A-1 condition. For further data consult R. M. Haddock, 50 East 42nd St., New York.

NO. 1050—Able auxiliary schooner, 79' x 17' x 9'; new 24 h.p. Palmer motor 1921; three staterooms, saloon, etc. In first-class condition. For full particulars apply William Gardner & Co., 1 Broadway, New York.

For Sale:

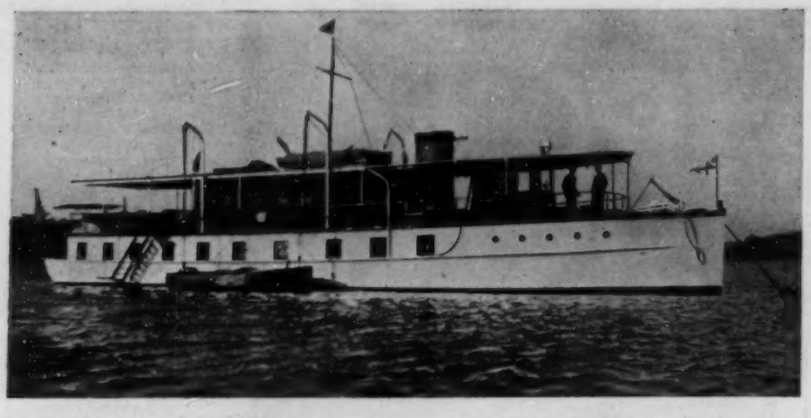
Auxiliary seagoing schooner, "Flying Cloud." Dimensions 55' x 14' x 7' 4". Designed by Hand, built 1922. Very strong construction and in perfect condition, a splendid little ship and a prize winner in this year's Bermuda race. Excellent accommodations, sleeps six aft, one forward. Motor Sterling Trident, 35-55 H.P. Speed under power 8½ knots. Sails, spars new this year. Three toilets. Equipment complete. Price low. May be inspected at New Bedford, Mass. For particulars address Lawrence Grinnell or W. H. Hand, Jr., New Bedford, Mass.

NO. 7821—Most desirable enclosed bridge deck cruiser, built 1921, successful design, best construction. 40' x 10' x 3' 6", six cylinder Sterling, all finest condition. Two cabins sleep 5-7, full headroom, two toilets, good galley complete, electric lights. Speed 12-15 miles, bridge controls, able and easily handled. None better available, reasonable price. Complete. Henry J. Gielow, Inc., 25 W. 43d Street, New York City.



NO. 8165—Attractive cruising houseboat, able, easily handled. Built 1920 heavy construction, six cylinder engine electric starting, bridge controls, speed 9 miles. Double, single stateroom, saloon, bath, deck house, sleeps six, crew stateroom, toilet. Dimensions, 45' x 13' x 3', completely equipped, including rail cloths. Made two cruises to Florida. Inspectable New York. Henry J. Gielow, Inc., 25 W. 43d Street, New York City.

NO. 8258—BARGAIN QUICK SALE—Desirable cruiser exceptionally complete, finest condition. 36' x 10' x 3', able, accommodates 4-6, full headroom, electric lighted, six cylinder motor fine order, speed ten miles, has linen, china, new dinghy, bedding, rugs. Must see boat to appreciate value. Inspectable near Providence, R. I. Opportunity. Henry J. Gielow, Inc., 25 W. 43d Street, New York City.



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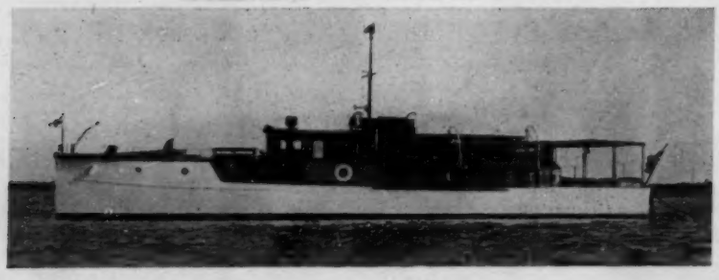
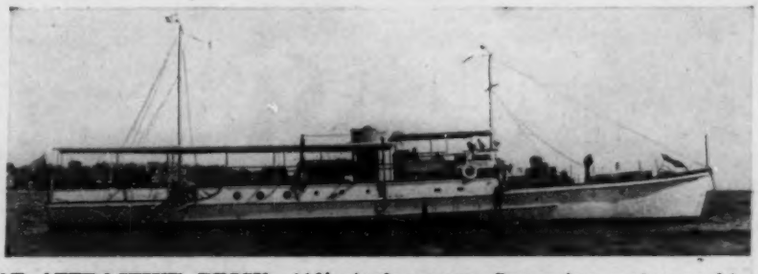


FOR SALE—62 ft. Great Lakes Cruiser, as good as new. Twin screw. Speed 22 miles. Owner anxious to sell, as he has bought larger yacht through us. Southern Yacht Agency, American Building, Baltimore, Md.

FOR SALE



AT ATTRACTIVE PRICE—110' single screw—Sea going motor yacht—6 cylinder 220 H.P. Standard motor—Speed 12 miles—Two double and one single staterooms—Also two berths in dining saloon—Crew's quarters—Two baths—Dining saloon—Galley—Absolutely first-class condition and fully equipped—Can inspect New York waters. Further particulars from Owner—R. H. Arnold, 120 Broadway, Room 2920, New York City.

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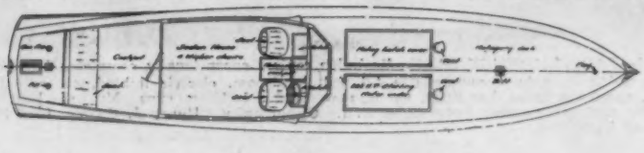

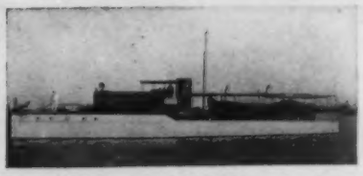

FOR SALE OR CHARTER—82 ft. Lawley built Cruiser. Standard Engine. Speed 15 miles. In perfect condition throughout. The best yacht of its type available. Will charter for a reasonable price or sell at less than half cost. SOUTHERN YACHT AGENCY, American Building, Baltimore, Md.

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NO. 2147. High Speed Twin Screw Cruiser. Excellent sea boat. V Bottom. 55' x 11' x 2' 9". Built 1920. Two 300 H.P. Sterling Motors new 1921. Speed up to 30 miles. Double stateroom; saloon with two Pullman and two transom berths. Two toilet rooms. Finished in mahogany and butternut. Electric lights. Price attractive for quick sale. H. H. JENNINGS COMPANY, 154 Nassau Street, New York.

NO. 2384. Beautiful Canadian Power Yacht. Twin Screw, 65 ft. long, 12 ft. beam, 4 ft. 2 in. draft. Built in 1919. Heavily constructed and exceptionally roomy. Four staterooms and large saloon, about 12 ft. long, with four berths. Sleeping accommodations for ten people. Two toilets. Large galley. Mahogany deckhouse. Two Sterling Motors. Speed 12-16 miles. Electric lights, separate lighting plant, etc. Price attractive. H. H. JENNINGS COMPANY, 154 Nassau Street, New York City.

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50 Flat bottom row boats, cedar planked, mahogany trimmed, finished bright.
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A Flier in Logwood

(*Continued from page 96*)

an angle of 45 degrees and there she stuck. She just lay dead in the water, sliding to leeward but going neither ahead nor astern. Then all at once the tack of the spanker topsail let go with a *"whang"* and the sheet parted right after it. She staggered up then and began to gather way. We clewed that topsail down and did not use it any more.

This mischance might easily have been fatal if it had happened on the other hitch with the land close under our lee, because the vessel drifted nearly a mile before she got on her feet. But Old Gorgeous had his fighting blood up now and announced that he would try it again, only that we should do it better next time. Accordingly he had us run a messenger line from the winch to the weather crotch-tackle of the spanker boom so that he could haul that spar right across the deck and "keep her coming" as she rounded up into the wind. With this rig and better handling of the head sheets she came round without mishap right on top of Cape Maysi.

We kept on beating out towards Great Inagua Island all the rest of the night. When morning came the wind had moderated considerably and the Cape was miles away to leeward. Indeed we were able to lay a course for Tortuga and take the wind abeam. Even so, it was approaching sunset when the *Three Sisters* poked her bowsprit past the eastern end of that island, which used to be such a hangout for pirates and buccaneers.

Right ahead on the Haitian shore was a little haven with a tumbledown fort and the semblance of a town. It seemed to have only such shelter as was afforded by the swell of the Trade Wind sweeping into the sound between and the palms bending to weight of the wind.

Less than a mile from the beach we were boarded by a pilot. He spoke English of a sort and kept urging the skipper, who wanted to anchor out in the sound, to keep on into a little cove just to windward of the ancient fort.

"How much will it pay?" asked the Financial Expert in a small voice in the silence which ensued.

"That little place!" Gorgeous expostulated. "There's no room for a catboat to swing in there!"

"Mais oui, M'sieu; keep go—keep go!" cried the pilot.

Very uneasily George kept on. The schooner was booming now, with a reefing breeze over her quarter and everything set.

"Haul down the headsails, boys," he sang out. "We'll have to round up short. And have both anchors ready for letting go."

The pilot indicated that he should head for the fort. It seemed ridiculous, as the land was so close you could see dogs running on the beach and there was only the faintest sort of a depression in the shore. But he had a way with him, that pilot, and George held his course.

On we rushed, until it seemed that he was bent on running our jib-boom into the palms. All of a sudden he sprang up. "Now let her come to, Capitaine!" he exclaimed.

She did, and we saw for the first time what the pilot was after. Projecting seaward for a couple of hundred yards from the windward side of the cove was a point of land which had been indistinguishable before from its background. It made a perfect breakwater; behind it we let go in comfort and security and rode at anchor within shouting distance of the town. It was as neat a piece of pilotage as I have seen.

It was thirteen days since we had left Gonaives, and when the skipper went ashore next morning to enter his ship, the elapsed time had become an even fortnight. Yet they told him at the custom house that he had made a remarkable passage for the time of year.

When he came back on board about noon there was a dogged look in Old Gorgeous's eye. He called all hands down into the cabin for a solemn confab and there proceeded to break the news.

It seemed there was plenty of logwood stacked on shore, but it had all been cut under contract for several American and French firms of dye manufacturers. We could not buy a stick, but we could have a cargo for a Long Island Sound port *as freight* if we would take it.

"Three dollars and a half per ton," said George.

There was another silence, but at last the Hog spoke up.

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Gorgeous breathed a deep sigh. "Thank you for them kind words!"

"Come on!" The Expert had sprung to his feet. "Let's take this freight and count on it simply to pay our expenses. In the meantime I'll be hunting round to see if I can't pick up something that won't take much space, but that we can make some real money on."

"You might fill the cabin full of little green parrots," the Hog acidly suggested.

So we turned out to be a common freighter after all, and set to work to taste the joys of a stevedore's life. The first lighter load of wood came off that very afternoon.

The further adventures of the Three Sisters *and her skipper and crew and of what befell them in the Bahamas on their return passage will appear in the March issue of YACHTING.*

Help Kill this Tax

(*Continued from page* 110)

you've outworn or outgrown your present one, to make your voice heard in this matter. The best way is to write your congressman and tell him why the present tax is unjust and discriminatory. Especially if you live in the Middle West, do this. It is from that quarter that most of the sentiment in favor of the tax comes. There is but little boating and less boat building in the districts of these members of congress, and they fail to see the far reaching results of this tax. Yachtsmen and the users of small boats are not trying to dodge taxation. They are just as willing as any other citizens to pay their proportion of the taxes, but they do object to a discriminatory tax, the result of which is killing an industry in which they are vitally interested as users of its product.

Star Class News

(*Continued from page* 108)

gins, Norfolk, Va., or Gifford Pearre, Equitable Trust Company, Baltimore, who are promoting these fleets.

The International Series this year will consist of five races in all. It will be sailed on Long Island Sound in late August or September.

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